Montana Statewide Fisheries Management

Program and Guide





THE **OUTSIDE** IS IN US ALL

TABLE OF CONTENTS

STATEWIDE FISHERIES MANAGEMENT PROGRAM AND GUIDE PART I	4
INTRODUCTION AND PURPOSE	4
MONTANA'S FISHERIES RESOURCES	5
FISHERIES MANAGEMENT PROGRAM	11
AQUATIC HABITAT PROGRAM	33
WATER RECREATION AND ACCESS PROGRAM	45
AQUATIC INVASIVE SPECIES PROGRAM	52
STATEWIDE FISHERIES MANAGEMENT PROGRAM AND GUIDE PART II	56
KOOTENAI RIVER DRAINAGE	59
SOUTH FORK FLATHEAD RIVER DRAINAGE	79
SWAN RIVER DRAINAGE	85
FLATHEAD RIVER DRAINAGE	95
UPPER CLARK FORK RIVER DRAINAGE	105
CLARK FORK RIVER FLINT/ROCK DRAINAGE	113
BLACKFOOT RIVER DRAINAGE	129
BITTERROOT RIVER DRAINAGE	140
MIDDLE CLARK FORK RIVER DRAINAGE	149
LOWER CLARK FORK RIVER DRAINAGE	159
RED ROCK RIVER DRAINAGE	176
RUBY RIVER DRAINAGE	184
BEAVERHEAD RIVER DRAINAGE	190
BIGHOLE RIVER DRAINAGE	195
BOULDER RIVER DRAINAGE	203
JEFFERSON RIVER DRAINAGE	207
MADISON RIVER DRAINAGE	212
GALLATIN RIVER DRAINAGE	218
UPPER MISSOURI RIVER DRAINAGE	224
MISSOURI RIVER – DEARBORN DRAINAGE	236

SMITH RIVER DRAINAGE	244
SUN RIVER DRAINAGE	255
TETON RIVER DRAINAGE	264
BELT CREEK DRAINAGE	271
MISSOURI RIVER- JUDITH DRAINAGE	279
MARIAS RIVER DRAINAGE	300
UPPER MILK RIVER DRAINAGE	312
MIDDLE MILK RIVER DRAINAGE	321
LOWER MILK RIVER DRAINAGE	331
MUSSELSHELL RIVER DRAINAGE	338
FORT PECK RESERVOIR DRAINAGE	354
MISSOURI RIVER – POPLAR DRAINAGE	362
LOWER MISSOURI RIVER DRAINAGE	370
UPPER YELLOWSTONE RIVER DRAINAGE	378
BIGHORN RIVER DRAINAGE	392
MIDDLE YELLOWSTONE RIVER DRAINAGE	400
TONGUE RIVER DRAINAGE	413
POWDER RIVER DRAINAGE	424
LITTLE MISSOURI RIVER DRAINAGE	434
LOWER YELLOWSTONE RIVER DRAINAGE	439
MANAGEMENT DIRECTION FOR SPECIES	459
GLOSSARY	481

Statewide Fisheries Management Program and Guide: Part I

Introduction and Purpose

The Mission of Montana Fish, Wildlife & Parks (FWP) states: Montana Fish, Wildlife & Parks, through its employees and citizen commission and board, provides for the stewardship of the fish, wildlife, parks, and recreational resources of Montana, while contributing to the quality of life for present and future generations. The work of FWP and its divisions is further directed by the Vision and Guide 2016-2026. In support of the Mission and Vision: the FWP Fisheries Division preserves, maintains, and enhances aquatic species and their ecosystems to meet the public's demand for recreational opportunities and stewardship of aquatic wildlife.

The first version of this Statewide Fisheries Management Program and Guide (Guide) was published in 2013. This version was updated to include current fisheries management information and was edited to make it more user friendly. The Guide consists of two parts: Part I describes the overarching, statewide goals and objectives for the core Fisheries Programs and areas of work within these programs, as well as special management issues, challenges, and initiatives within each program and guidance for addressing them; Part II provides more specific direction for fisheries management with 40 drainage basins grouped into seven ecoregions across the state (Table 1). Very few changes were made to Part II; however, Part I was significantly edited to reflect the current structure of the Fisheries Division and to streamline the document. The purpose of the Guide remains to provide the public with the rationale behind the fisheries management approach and direction of the Fisheries Division. The Guide describes the main programs, current operations or areas of work within these programs, and the management emphasis and priorities for all waters of the state. The Guide helps with setting priorities for the Division, is used to maintain consistency with management direction, and helps to guide regulation-setting.

The Guide provides management direction for all waters of the state that are under the jurisdiction of FWP. For each drainage there is a short narrative that describes the fisheries, including fishery potential, limiting factors, special issues or challenges, as well as public access status and needs. There is a table that describes a management type and direction for representative fish species by drainage. Montana waters in Yellowstone National Park and Glacier National Park are not within the jurisdiction of FWP although the Fisheries Division coordinates closely with the National Park Service. Similarly, the Guide does not apply to Montana waters within the boundaries of Native American Tribal Reservations, unless specifically stated in the Guide, but FWP frequently coordinates with Tribes regarding fisheries management.

There are some large waterbodies in the State that have separate and specific fisheries management plans. Most of these are high-use fisheries or waterbodies with native fish conservation programs. The Guide does not override those plans but defers to them and provides guidance for managing adjacent waters in a manner that complements and coordinates with those individual plans. Current management plans include the Fort Peck Reservoir Fisheries Management Plan, the Upper Missouri River (Helena Area) Reservoirs Fisheries Management Plan, and the Flathead Lake Fisheries Co-Management Plan. Finally, there are numerous waterbody-specific native fish species and/or aquatic habitat restoration strategies and

interagency agreements. The Guide does not supersede these other documents but defers to them, as appropriate.

There are four main Programs that make up the FWP Fisheries Division:

- Fisheries Management Program (page: 10)
- Aquatic Habitat Program (page: 32)
- Water Recreation and Access Management Program (page: 44)
- Aquatic Invasive Species Management Program (page: 51)

The above four Programs are described in detail in subsequent sections in Part I. There are a number of divisions, bureaus, work units, and programs within FWP that provide support to the Fisheries Division. For example, there are Wildlife Management Areas and State Parks that provide angling opportunities and fisheries habitat. The Legal Unit provides important guidance and support in the promulgation and interpretation of laws and rules. The Technology Services Division provide essential computer and database management services. The Finance Division plays a key role in supporting operations and ensuring fiscal accountability. Two Divisions in particular warrant additional mention due to the critical support they provide to the Fisheries Division: the Communication and Education Division, and the Enforcement Division. The Communication and Education Division helps to inform the public on management actions and educates the public on recreational opportunities provided by the Fisheries Division. The Enforcement Division is essential for ensuring compliance with rules, regulations and state laws that protect and enhance the state's aquatic resources.

Montana's Fisheries Resources

Montana is home to 91 species of fish; 57 native to the state, 34 nonnative, and includes a number of subspecies and hybrid crosses. Within the seven ecoregions of the state (see map at start of Part II of Guide for ecoregion boundaries), the Lower Yellowstone and Lower Missouri have the greatest number of total species (69 in Lower Missouri, 65 in Lower Yellowstone). By contrast, the ecoregions west of the Continental Divide are relatively less diverse, with the Kootenai having 32 species, the Clark Fork having 43 species and the much smaller St. Mary having only 20 species. Statewide, there are almost 54,000 miles of streams and rivers that hold fish, and over 697,000 acres of lakes, ponds and reservoirs with fish. Refer to Table 1 below for a list of Montana fish species and their distributions.

Table 1. Conservation status, species designation, and presence by ecoregion for fish species in Montana.

Family	Sp	Species			Ecoregion ^{3,4}							
	Common Name	Scientific Name	Montana ¹	Federal ²	Kootenai	Clark Fork	St. Mary	Upper Missouri	Lower Missouri	Upper Yellowstone	Lower Yellowstone	
	Kootenai River White Sturgeon	Acipenser transmontanus	C (S1)	Е	N	-	-	-	-	-	-	
Sturgeons	Pallid Sturgeon	Scaphirhynchus albus	C (S1)	Е	-	-	-	N	N	-	N	
	Shovelnose Sturgeon	Scaphirhynchus platorynchus	-	T (SA)	-	-	-	N	N	-	N	
Paddlefishes	Paddlefish	Polyodon spathula	C (S2)	-	-	-	-	N	N	-	N	
Gars	Shortnose Gar	Lepisosteus platostomus	C (S1)	-	-	-	-	-	N	-	N	
Mooneyes	Goldeye	Hiodon alosoides	-	-	-	-	-	N	N	N	N	
	Goldfish	Carassius auratus	-	-	-	I	-	I	I	I	I	
	Northern Redbelly Dace	Chrosomus eos	C (S3)	-	-	-	-	N	N	-	N	
	Northern Redbelly Dace x Finescale Dace Hybrid	Chrosomus eos x C. neogaeus	C (S3)	-	-	-	-	N	N	-	N	
	Lake Chub	Couesius plumbeus	-	-	-	-	-	N	N	N	N	
	Common Carp	Cyprinus carpio	-	-	-	I	-	I	I	I	I	
	Utah Chub	Gila atraria	-	-	-	-	-	I	-	-	-	
	Western Silvery Minnow	Hybognathus argyritis	-	-	-	-	-	N	N	N	N	
Minnows	Brassy Minnow	Hybognathus hankinsoni	P (S4)	-	-	-	-	N	N	N	N	
	Plains Minnow	Hybognathus placitus	P (S4)	-	-	-	-	N	N	-	N	
	Sturgeon Chub	Macrhybopsis gelida	C (S2)	U	-	-	-	N	N	-	N	
	Sicklefin Chub	Macrhybopsis meeki	C (S1)	U	-	-	-	-	N	-	N	
	Northern Pearl Dace	Margariscus nachtriebi	C (S2)	-	-	-	N	N	N	-	N	
	Peamouth	Mylocheilus caurinus	-	-	N	N	-	-	-	-	-	
	Golden Shiner	Notemigonus crysoleucas	-	-	-	-	-	I	I	-	I	
	Emerald Shiner	Notropis atherinoides	-	-	-	I	-	N	N	N	N	

Table 1. Continued.

Family	Species			Conservation Status			Ecoregion ^{3,4}							
	Common Name	Scientific Name	Montana ¹	Federal ²	Kootenai	Clark Fork	St. Mary	Upper Missouri	Lower Missouri	Upper Yellowstone	Lower Yellowstone			
	Spottail Shiner	Notropis hudsonius	-	-	-	-	-	I	I	-	I			
	Sand Shiner	Notropis stramineus	-	-	-	-	-	N	N	N	N			
	Fathead Minnow	Pimephales promelas	-	-	I	I	-	N	N	N	N			
Minnows	Flathead Chub	Platygobio gracilis	-	-	-	-	-	N	N	N	N			
IVIIIIIOWS	Northern Pikeminnow	Ptychocheilus oregonensis	-	-	N	N	-	-	-	-	-			
	Longnose Dace	Rhinichthys cataractae	-	-	N	N	N	N	N	N	N			
	Redside Shiner	Richardsonius balteatus	-	-	N	N	-	I	-	I	-			
	Creek Chub	Semotilus atromaculatus	P (S4)	-	-	-	-	I	I	-	N			
	River Carpsucker	Carpiodes carpio	-	-	-	-	-	N	N	N	N			
	Longnose Sucker	Catostomus catostomus	-	-	N	N	N	N	N	N	N			
	White Sucker	Catostomus commersoni	-	-	-	I	-	N	N	N	N			
	Largescale Sucker	Catostomus macrocheilus	-	-	N	N	-	-	-	-	-			
Suckers	Mountain Sucker	Catostomus platyrhynchus	-	-	-	-	-	N	N	N	N			
	Blue Sucker	Cycleptus elongatus	C (S2)	-	-	-	-	N	N	N	N			
	Smallmouth Buffalo	Ictiobus bubalus	-	-	-	-	-	N	N	N	N			
	Bigmouth Buffalo	Ictiobus cyprinellus	-	-	-	-	-	N	N	N	N			
	Shorthead Redhorse	Moxostoma macrolepidotum	-	-	-	-	-	N	N	N	N			
	Black Bullhead	Ameiurus melas	-	-	I	I	-	I	I	I	I			
North American	Yellow Bullhead	Ameiurus natalis	-	-	-	I	-	-	I	-	I			
Catfishes	Channel Catfish	Ictalurus punctatus	-	-	-	-	-	N	N	N	N			
	Stonecat	Noturus flavus	-	-	-	-	-	N	N	N	N			

Table 1. Continued.

Family	Species			Conservation Status			Ecoregion ^{3,4}							
	Common Name	Scientific Name	Montana ¹	Federal ²	Kootenai	Clark Fork	St. Mary	Upper Missouri	Lower Missouri	Upper Yellowstone	Lower Yellowstone			
Smelts	Rainbow Smelt	Osmerus mordax	-	-	-	-	-	-	I	-	I			
	Cisco	Coregonus artedi	-	-	-	-	-	I	I	-	I			
	Lake Whitefish ^a	Coregonus clupeaformis	-	-	-	I	N	-	I	-	-			
	Yellowstone Cutthroat Trout	Oncorhynchus clarki bouvieri	C (S2)	-	I	I	I	I	I	N	N			
	Westslope Cutthroat Trout	Oncorhynchus clarki lewisi	C (S2)	-	N	N	N	N	N	I	-			
	Rainbow Trout	Oncorhynchus mykiss	-	-	I	I	I	I	I	I	I			
	Golden Trout	Oncorhynchus mykiss aguabonita	-	-	I	I	-	I	-	I	-			
	Columbia River Redband Trout	Oncorhynchus mykiss gairdneri	C (S1)	-	N	-	-	-	-	-	-			
Trouts and	Kokanee b	Oncorhynchus nerka	-	-	I	I	I	I	I	-	-			
Salmons	Chinook Salmon	Oncorhynchus tshawytscha	-	-	-	-	-	-	I	-	-			
	Pygmy Whitefish	Prosopium coulteri	C (S3)	-	N	N	-	-	-	-	-			
	Mountain Whitefish	Prosopium williamsoni	-	-	N	N	N	N	N	N	N			
	Brown Trout	Salmo trutta	-	-	I	I	I	I	I	I	I			
	Bull Trout	Salvelinus confluentus	C (S2)	T	N	N	N	-	-	-	-			
	Brook Trout	Salvelinus fontinalis	-	-	I	I	I	I	I	I	I			
	Lake Trout ^c	Salvelinus namaycush	C (S2)	-	I	I	N	N	I	I	I			
	Arctic Grayling	Thymallus arcticus	C (S1)	-	I	I	I	N	-	I	-			
	Northern Pike ^d	Esox lucius	-	-	I	I	N	I	I	I	I			
Pikes and Mudminnows	Northern Pike x Muskellunge hybrid (Tiger Muskie)	Esox lucius x E. masquinongy	-	-	-	I	-	I	I	Ι	I			
	Central Mudminnow	Umbra limi	-	-	-	I	-	-	-	-	-			
Trout-perches	Trout-perch	Percopsis omiscomaycus	C (S2)	-	-	-	N	-	-	-	-			

Table 1. Continued.

Family		Species	Conservati	Ecoregion ^{3,4}							
	Common Name	Scientific Name	Montana ¹	Federal ²	Kootenai	Clark Fork	St. Mary	Upper Missouri	Lower Missouri	Upper Yellowstone	Lower Yellowstone
Cods	Burbot	Lota lota	P (S4)	-	N	-	N	N	N	N	N
Topminnows	Plains Killifish	Fundulus zebrinus	-	-	-	-	-	-	I	-	I
	Western Mosquitofish	Gambusia affinis	-	-	-	I	-	I	I	I	-
	Sailfin Molly	Poecilia latipinna	-	-	-	-	-	I	I	-	I
Livebearers	Shortfin Molly	Poecilia mexicana	-	-	-	-	-	I	-	-	-
	Green Swordtail	Xiphophorus hellerii	-	-	-	-	-	I	-	-	-
	Variable Platyfish	Xiphophorus variatus	-	-	-	I	-	I	-	-	-
Sticklebacks	Brook Stickleback	Culaea inconstans	P (S4)	-	-	I	-	I	N	I	N
	Rocky Mountain Sculpin	Cottus bondi	-	-	-	N	N	N	N	N	N
	Columbia Slimy Sculpin	Cottus cognatus	-	-	N	N	-	-	-	-	-
Cardenina	Torrent Sculpin	Cottus rhotheus	C (S3)	-	N	-	-	-	-	-	-
Sculpins	Spoonhead Sculpin	Cottus ricei	C (S3)	-	-	-	N	-	-	-	-
	Cedar Sculpin	Cottus schitsuumsh	-	-	-	N	-	-	-	-	-
	Deepwater Sculpin	Myoxocephalus thompsonii	C (S3)	-	-	-	N	-	-	-	-
Temperate Basses	White Bass	Morone chrysops	-	-	-	-	-	-	I	-	I
	Rock Bass	Ambloplites rupestris	-	-	-	-	-	-	-	-	I
	Green Sunfish	Lepomis cyanellus	-	-	-	-	-	-	I	I	I
Sunfishes	Pumpkinseed	Lepomis gibbosus	-	-	I	I	-	I	I	I	I
Surinsnes	Bluegill	Lepomis macrochirus	-	-	I	I	-	I	I	I	I
	Smallmouth Bass	Micropterus dolomieu	-	-	I	I	-	I	I	I	I
	Largemouth Bass	Micropterus salmoides	-	-	I	I	-	I	I	I	I

Table 1. Continued.

Family	Species			Conservation Status			Ecoregion ^{3,4}							
	Common Name	Scientific Name	Montana ¹	Federal ²	Kootenai	Clark Fork	St. Mary	Upper Missouri	Lower Missouri	Upper Yellowstone	Lower Yellowstone			
Sunfishes	White Crappie	Pomoxis annularis	-	-	-	I	-	I	I	I	I			
	Black Crappie	Pomoxis nigromaculatus	-	-	I	I	-	I	I	I	I			
	Iowa Darter	Etheostoma exile	C (S3)	-	-	-	-	N	N	-	N			
Perches and	Yellow Perch	Perca flavescens	-	-	I	I	-	I	I	I	I			
Darters	Sauger	Sander canadense	C (S2)	-	-	-	-	N	N	N	N			
	Walleye	Sander vitreum	-	-	-	I	-	I	I	I	I			
Drums	Freshwater Drum	Aplodinotus grunniens	-	-	-	-	-	N	N	-	N			
Total Species in Montana and Subtotal by Ecoregion			91	-	32	43	20	67	69	48	65			

Note: Species designation according to Brown (1971), Page et al. (2013), MFWP (2013), MNHP (2018), and USGS (2018).

C=Species of Concern, P=Potential Species of Concern; S1=high risk, S2=at risk, S3=potentially at risk, S4=suspected to be declining.

² E=Endangered, T=Threatened, U=Under Review; SA=Listed under Similarity of Appearance provisions.

³ Ecoregion boundaries and their included major drainages are defined in Part II of the Statewide Fisheries Management Program and Guide in Figure 1.

⁴ N=Native, I=Introduced.

^a Lake Whitefish, though widely introduced, are native to a single drainage in Montana, the St. Mary River drainage.

b A population of Kokanee, historically native to Kootenay Lake, British Columbia, Canada, may have strayed upstream into the lower Kootenai River downstream of Kootenai Falls; however, that native population went extinct due to the stocking of nonnative Kokanee strains into the system and due to environmental changes to the Kootenai River following the construction of Libby Dam (Knudson 1994; Behnke 2002; Ireland et al. 2002; Ericksen et al. 2009).

^c Lake Trout are native to only four lakes in Montana (Elk, Twin, Waterton, and St. Mary).

^d Northern Pike, though widely introduced, are native to a single drainage in Montana, the St. Mary River drainage.

Fisheries Management Program

Fisheries Management Goals

As outlined in the FWP Vision and Guide 2016-2026, the overarching commitment of the Fisheries Management Program is:

Conserve, protect, and enhance fish and wildlife populations, their habitats, and the public's opportunity to enjoy them.

Actions to achieve this commitment include:

- Restore, maintain, and protect native species and their habitats.
- Proactively manage fish and wildlife populations in a transparent and science-based manner.
- Manage game species in a way that provides recreational and sustainable harvest opportunities while minimizing conflicts.
- Improve and protect fish and wildlife habitat so that high-priority areas are conserved and connected at a landscape level.
- Invest in and use research, monitoring, and emerging technology so that management decisions are well informed.
- Anticipate and respond to emerging issues that will affect fish and wildlife.

Specific strategies and examples for each action and their relationship with the resource management goal are described below.

Restore, maintain, and protect native species and their habitats

Native species conservation is a high priority for the Fisheries Division. The Fisheries Management Program strives to maintain viable populations of all native fish species in Montana. Some native species have high conservation value, including those listed under the Endangered Species Act (ESA) (i.e., bull trout, pallid sturgeon, and Kootenai River white sturgeon). Other species designated as Species of Concern (SOC) include sauger, westslope cutthroat trout, Yellowstone cutthroat trout, and paddlefish. Native species with sport-fishing value, but with no special conservation status, such as channel catfish, shovelnose sturgeon, and mountain whitefish, are managed much like non-native species with sport-fishing value. This designation means that on a case-by-case basis their populations will be maintained or adjusted upward or downward depending on their popularity and interactions with other species. Native species without sport-fishing value or special conservation status, such as, longnose dace, Rocky Mountain sculpin, fathead minnow, and longnose sucker, are managed as forage fish when appropriate. Other native species without sport-fishing value but potentially could receive special conservation status include small-bodied prairie species, such as sturgeon chub and northern redbelly dace.

<u>Proactively manage fish and wildlife populations in a transparent and science-based manner</u>

To the extent possible, scientific data is used to guide fisheries management. Monitoring activities such as netting and electrofishing provide managers with data on the size, composition, and trends of fish species and fish communities. An analysis of these data may reveal a need to manipulate a population to meet management goals. Fisheries that are maintained by hatchery stocking can be manipulated by changing stocking rates or sizes of fish that are stocked. Manipulation of wild fisheries is typically more difficult. Engaging anglers for this purpose through fishing regulations is the preferred method, but often may not be sufficient if the target species is not easily captured by hook and line, or if the angling pressure on the waterbody is insufficient to accomplish the desired changes.

Manage game species in a way that provides recreational and sustainable harvest opportunities while minimizing conflicts

Management of sport-fish species is a driving force for fisheries management in Montana. Anglers purchase fishing licenses for the opportunity to catch fish, and most of those anglers also want the opportunity to harvest fish. Harvest is an important tool for fisheries management, and most fisheries in Montana provide opportunity for harvest. Fisheries with high angler use and harvest are monitored closely to ensure that populations remain viable. In some high-use fisheries, such as urban ponds and large reservoirs, supplemental stocking of fish is necessary to meet public demands for fishing. On waters with high recreational use besides angling, special recreational rules may be implemented to reduce conflicts between angling types, such as guided and unguided trips, or float fishing and wade fishing, or between user groups such as non-fishing floaters and anglers. See additional discussion in the Water Recreation and Access Program (page 44).

Improve and protect fish and wildlife habitat so that high-priority areas are conserved and connected at a landscape level

Wild fish production is a central tenet of fisheries management in Montana. Conserving and improving fish habitat is necessary to maximize wild fish production and maintain or improve wild fish populations. See the Aquatic Habitat Program (page 51).

Invest in and use research, monitoring, and emerging technology so that management decisions are well informed

Monitoring and research are essential for ensuring the best information available is used for fisheries management decisions. Many of Montana's most popular fisheries are routinely monitored, with some monitoring surveys containing decades of collected fish population data. Fisheries staff are engaged with peers and professionals from other agencies and managers from other states to stay abreast of the latest technologies and trends in fisheries science and evaluate how these can be incorporated into our own management programs.

Anticipate and respond to emerging issues that will affect fish and wildlife

Fisheries Division staff regularly communicate with other agencies and NGO's to discuss ongoing fisheries management issues, as well as emerging issues. The angling public is also passionate about Montana's fishery and aquatic resources and are highly engaged in identifying issues. Typically, if there is a critical resource issue or emergency, FWP is first informed by sportsmen in the field. Fish staff encourage input from and information exchange with the public.

Fisheries Management Program Components

Management Planning

As necessary, FWP develops fisheries management plans for individual waterbodies and/or individual fish species. These plans identify the management direction for a species or collection of species within a waterbody or a broader geographic area such as a drainage or the entire state. The plans describe the resource being managed, the rationale for management direction being taken, and specific actions that will be implemented to accomplish plan goals and objectives. The primary audience for fisheries management plans is FWP staff and the public. The agency benefits because the effort ensures that staff must deliberate and evaluate management actions to ensure they are consistent with, and adequate to achieve stated goals and objectives. Through this process, a written record is created, which provides continuity over time. The public benefits from a well-constructed and transparent plan because it becomes a ready source of information and provides the rationale behind agency activities such as fishing regulations, stocking practices and habitat restoration projects. The planning process also provides a venue or opportunity for the public to help shape management direction for that area or relevant species. Seeking input from the public also fulfills a legal obligation to ask the users of the resource for their opinion and ideas.

Description of current operations and/or areas of work

All management plans developed by FWP must respect and strive for consistency with other jurisdictions that have authority over fishery resources. Jurisdictions with exclusive authority over fishery resources include Glacier and Yellowstone National Parks and the Montana Indian Reservations. Flathead Lake is a unique example of a shared jurisdiction requiring comanagement with the Confederated Salish and Kootenai Tribes (CSKT) and development of a plan with goals and objectives agreed to by both parties. Another unique jurisdictional situation arises in the case of fisheries management in Wilderness Areas. Federal law and courts have acknowledged the primacy of states to manage waters in Wilderness Areas. There are certain management activities that were evaluated to accommodate restrictions on the use of mechanized equipment as provided for in the Wilderness Act. Through an Agreement with the U.S. Forest Service (USFS), the Bureau of Land Management (BLM), and the Association of State Fish and Wildlife Agencies, mechanized means (such as helicopters or all-terrain vehicles) to stock fish in waters within a Wilderness Area are permitted only if such practices were in effect prior to the creation of the affected Wilderness Area. For example, in the lakes in the Absaroka-Beartooth Wilderness this agreement means that lakes stocked by airplane or helicopter prior to 1964 may

continue to be stocked in such a manner. Stocking that was initiated post-Wilderness designation may continue but must be done on foot or through the use of pack animals.

Special issues, challenges or initiatives

Management plans have been developed for individual waterbodies (e.g., Flathead Lake Co-Management Plan, Fort Peck Reservoir Management Plan), collections of waterbodies (Upper Missouri River Reservoirs Fisheries Management Plan), or species groups (e.g. Warmwater Fisheries Management Plan). These types of management plans are prescriptive in that management actions are recommended when defined goals or thresholds are exceeded or are not met. The Statewide Fisheries Management Program and Guide is not prescriptive in this sense, but it does transparently describe how fisheries programs are administered and describes fisheries management direction for waterbodies across the state. This guide also integrates the management direction already identified in the waterbody specific plans and waters not previously described.

Native Species Management

Montana is home to 57 native fish species, many of which continue to thrive throughout their ranges in the state due in part to progressive habitat conservation and sustainable fisheries management practices. However, some species sensitive to habitat fragmentation, habitat degradation, and competition or hybridization with introduced species have seen their abundances decline and ranges contract. As such, these species are considered as "at-risk" and are protected in Montana as Species of Concern (SOC) and include paddlefish, blue sucker, sturgeon chub, westslope cutthroat trout, and sauger. This list of SOC also includes species federally-listed under the Endangered Species Act (ESA), including Kootenai River white sturgeon, pallid sturgeon, and bull trout).

A primary goal of FWP's Fisheries Division is to protect, maintain, and restore native fish populations and their genetic diversity. This goal is backed by FWP policy and state law, which require FWP to implement programs that manage sensitive native species in a manner that assists in the maintenance or recovery of those species, and that prevents the need to list the species under ESA. Ideally, native species of game fish are sustainably managed and imperiled populations recover to the point of sustainable fishing and harvest.

Description of current operations and/or areas of work

Much of the state's fisheries are managed at a population and habitat level; thus, native fish populations are often managed as part of the aquatic community that may include native and nonnative species comprised of those considered sportfish and nongame species. While this broad approach has been successful for many areas of the state and for many species, management of SOC is typically more focused, to specifically address priority threats and limiting factors to prevent further imperilment.

Pallid sturgeon, paddlefish, sauger, Arctic grayling, bull trout, and two subspecies of cutthroat trout (westslope, Yellowstone) are among the native species that receive significant management attention and Fisheries Division staff dedicated to their management, conservation and

restoration. Furthermore, management of the three native species listed under ESA (threatened bull trout, endangered pallid sturgeon, and endangered Kootenai River white sturgeon) is often guided by collaborative agreements with other resource agencies, Tribal entities, and private organizations which share common goals and resources to implement conservation and recovery programs. Essential to these efforts is the proper management, and restoration of habitat and ecosystems that sustain ecological resiliency and species diversity. Though recovery planning efforts for federally-listed species are guided by the USFWS, FWP and other resource agencies and organizations are crucial partners in the development, funding, and implementation of threatened and endangered species management programs. Finally, though not federally-listed, several species-specific agreements and management plans have been developed by FWP, partner agencies, Tribes, and private resource organizations for coordinated efforts to conserve Arctic grayling, and westslope cutthroat trout and Yellowstone cutthroat trout. FWP is also working with partner agencies to review the conservation status of small bodied prairie fishes, such as sturgeon chub and sicklefin chub.

Special issues, challenges or initiatives

One of the leading causes of imperilment of several native species includes the fragmentation and alteration of habitat through the construction and maintenance of dams and impoundments. These manmade structures have caused significant habitat changes to many rivers, and also impede necessary migrations of several species. Status and potential recovery of endangered pallid sturgeon and Kootenai River white sturgeon are directly linked to dam construction and operation on the Missouri and Kootenai rivers. Arctic grayling, paddlefish, sauger, and threatened bull trout are also among the numerous SOC impacted by dams and other impediments to movement. While impacts to riverine ecosystems and sensitive riverine species can by determined by each species' unique life history, the extent of those impacts is often dictated by the size, design and operating mandates of the structure itself (e.g. flood control, power production, and irrigation). Structures like Fort Peck Dam and Libby Dam tower in comparison to Intake Diversion Dam but the challenges in mitigating the impacts of these structures are often the same. While potential solutions continue to be sought in reducing bidirectional impediments in river ecosystems, impacts on native fish continue to be further understood.

Of equal importance, the presence of nonnative fishes in Montana has forever changed management of many native species. Nonnative fish can compete and hybridize with, prey on, and displace native fish. Challenges associated with nonnative species are widespread, and include significant concerns like hybridization between introduced walleye and native sauger, competition between introduced brook trout and native cutthroat trout, and predation of native bull trout by introduced lake trout. In certain locations, the impacts of nonnative species are managed through harvest regulations, active suppression or eradication of nonnative fish, maintenance or placement of barriers to prevent invasions of nonnative fish, or through selective stocking practices. Assemblages of native and nonnative species alike provide important fisheries in Montana, and balancing the management of sensitive native species with other fisheries management objectives is an important component of FWP fisheries management.

See discussion in the Management of Individual Species section for details on management strategies and issues related to individual species across the state.

Applicable laws, rules and policies

Statute

87-1-201: Directs FWP to implement programs that manage sensitive native species in a manner that assists in the maintenance or recovery of those species, and that prevents the need to list species under the federal Endangered Species Act (ESA).

Nonnative Species Management

There are 32 nonnative species of fish in Montana. Many of these species were originally introduced by FWP or the U.S. Fish and Wildlife Service to create a new fishery or to support one (e.g. introduced forage species in lakes and reservoirs). This practice was popular throughout the west, so much so that no major drainages in Montana are without at least one nonnative species.

Description of current operations and/or areas of work

Contemporary fisheries management aims to conserve habitat and promote wild production of native and nonnative fishes. Aquatic systems are conserved and protected to provide a diversity of angling opportunities within the constraints of each managed waterbody. Most nonnative fisheries emphasize angler opportunity, and depending on management objectives, range from harvest oriented fisheries to catch and release only. In streams and rivers, wild fish management practices are emphasized, and fishing regulations are typically used to optimize angler catch rates. Restrictive harvest limits are usually imposed on the larger rivers, depending on management objectives. Hatchery production is used in high-mountain lakes, prairie ponds, and reservoirs to provide angling opportunities where natural recruitment is limited.

Monitoring fish populations and angler success are crucial to providing quality angling opportunities for nonnative species. Much of the time biologists and technicians spend in the field is devoted to collecting data to manage these species. Electrofishing and gillnetting are the two most frequently used methods to gather fish population data on both wild and hatchery-stocked fisheries in Montana. Mail surveys of anglers establish usage levels on waterbodies statewide, while creel surveys of anglers on the water provide information on catch rates and sizes of fish captured. These data are used by fisheries managers to evaluate effectiveness of stocking programs, fishing regulations, and habitat enhancement programs.

Special Issues, challenges or initiatives

Though reservoirs on major rivers have caused a number of impacts to numerous native fishes, they can also provide recreational angling opportunities for both coldwater and warmwater fishing in Montana. All but one (Flathead Lake) of the most utilized flat-water fisheries in the state are found in manmade reservoirs. Most of the large storage reservoirs are federally-managed, operated by the U.S. Army Corps of Engineers or the Bureau of Reclamation. Smaller, "run of the river", reservoirs are operated by Avista Corporation and NorthWestern Energy on the lower Clark Fork River and by NorthWestern Energy on the Missouri River.

Monitoring Fish Populations and Ecological Health

Data collection of fish abundance and distribution trends provides staff with essential information to manage the states fisheries. These data are used to monitor trends in populations and to understand how changes, ranging from human-caused to natural changes, affect populations. Making informed, biologically-sound, and ecologically-defensible decisions is only possible through effective and comprehensive data collection and interpretation.

Information on the status and trends of fish populations is used to evaluate the suitability of hatchery stocking levels, the effect of existing fishing regulations, or the capacity of a population to respond to alternative regulations. Survey results and inventory work have been essential to the management of aquatic resources and have helped to describe and quantify damages to natural resources over the last century, including highway construction, dam operations, and environmental disasters.

Results from survey and inventory activities are used in explaining fisheries and aquatic habitat information and providing technical assistance to the general public, angling groups and school children. Information is disseminated to the public through a variety of sources ranging from peer-reviewed publications in scientific journals, through the online FishMT website, to talks with sporting groups at a local level. FishMT is unique in that it provides basic fishing information, such as access site information and species information, but it also allows direct public access to FWP monitoring data.

Description of current operations and/or areas of work

The methods used to sample fish and other components of the aquatic environment are similar in each FWP region but the techniques vary depending on the specific site, species sought, or monitoring question. Despite a large number of species present in a waterbody, biologists will often monitor an indicator fish species, aquatic invertebrates, and selected water-quality parameters to detect adverse impacts from contaminants and alterations of habitat. Methods and techniques are constantly being refined and evaluated, and biologists rely on a combination of techniques and methods that have been empirically-shown to correlate data and allow for comparisons.

Special issues, challenges or initiatives

While collecting and monitoring data is critical work and leads to an understanding and management of the considerable resources in this state, it is also a costly endeavor. Thus, it is important to be thoughtful, efficient, and effective when developing study designs and objectives. FWP routinely analyzes its monitoring efforts for efficiency, effectiveness, and to ensure that goals are being met.

Angler Surveys

In addition to monitoring fish populations and general ecological health of aquatic systems a considerable amount of effort is spent on creel surveys and a statewide angling survey. Creel

surveys are typically conducted by staff in the field as anglers are leaving a particular body of water. The Statewide Angling Survey has been conducted by mail every other year since 1985 and provides an accurate biannual estimate of angling pressure on individual lakes and streams of the state. This survey provides fisheries managers, administrators, and the public a reliable measure of angling pressure (angler days) for use in making decisions about fishing regulations, fishing access sites, development of fisheries management plans, and allocation of funds. The survey also serves as a factor in determining the total economic value of an individual or composite fishery, and refines and updates FWP's net economic values for cold-and warm-water streams and lakes. It is also used to update information about the attitudes and preferences of anglers.

Description of current operations and/or areas of work

Angler success (catch and harvest rates, size and number of different species) is determined using standard creel census methods and mail/telephone surveys. Specific waters surveyed annually are selected according to management needs. Some waters are surveyed on an annual basis, while others may not be surveyed more than once every five or more years. The creel census involves creel clerks interviewing individual anglers, handing out questionnaires to anglers, and placing questionnaires at trailheads for use by backcountry anglers. Aerial surveys and car counters are sometimes used to count anglers using large or remote fishing waters. Mail and phone surveys are occasionally used to target either randomly selected anglers or a specific angling group. Currently, FWP conducts phone surveys of paddlefish tag holders and mail surveys of bull trout catch-card holders.

Special issues, challenges or initiatives

The statewide angling survey is conducted on odd-numbered license years, with the next scheduled to begin in the spring of 2019. Efforts are underway to evaluate the potential to incorporate email or automated electronic survey techniques as a vehicle for gathering fishing patterns of licensed anglers. The impetus for this innovation is the need to find more economical approaches than mail, which increases in cost as the price of postage continues to rise.

Fishing Regulations

Regulation Setting Process

The Fish and Wildlife Commission (Commission) has statutory authority to establish seasons, bag-limits, possession-limits and season-limits for any species of game fish. It may also declare a closed season on any fish threatened with undue depletion for any cause. Collectively, these limits and seasons are referred to as "fishing regulations."

The regulation-setting process is conducted on a four-year cycle with off-cycle changes made when specific criteria are met. Every fourth year FWP seeks input from the angling public and fisheries and enforcement staff about ideas and concerns that might be addressed by regulation changes. FWP staff uses the best information available to evaluate regulation requests and makes regulation recommendations to the Commission. The Commission also evaluates regulation proposals and decides which proposals will be advanced for public review. The

Commission makes a final decision based on input from the public and FWP staff. With the exception of emergency or time-sensitive changes, the regulations adopted by the Commission go into effect the following March 1st. These changes are captured in the Fishing Regulation booklet for that year.

FWP does not formally solicit ideas from the public during the other three years of the cycle, although the public is free to submit ideas throughout the four-year cycle. The reason for a formal public process occurring every fourth year is to give new regulations time to work, and to reduce time that staff and the public must devote to the regulation setting process. During the off-years, FWP may consider regulation changes generated by FWP fisheries and enforcement staff. There are criteria for the types of regulation changes that are considered during off-years. Proposals that meet one or more of the following criteria are eligible for presentation to the Commission during off-cycle years:

- 1) Clarifications: regulation change is needed to clarify intent of regulation or to correct typos or other errors that led to erroneous information in regulations;
- 2) Enforcement: regulation change is needed to improve enforcement efforts, to prevent illegal take, or to clarify intent to reduce innocent violations;
- 3) Conservation: regulation change is needed to conserve or protect the population of any species, but primarily Threatened and Endangered species;
- 4) Relevancy: regulation no longer has a real management purpose or value and there is little public following, constituency or controversy;
- 5) Management Plans: FWP has committed to implementing certain regulation changes if certain events transpire, (e.g., changes in fish populations, angling pressure, catch rates, etc.), with proposals typically based upon goals or management objectives defined through a publicly vetted process.

Applicable laws, rules, and policies

Statute:

87-1-201: Authorizes the Department to enforce all the laws of the state regarding the protection, preservation, management, and propagation of fish.

87-1-202: Rules adopted by the commission setting regulations must be published in a pamphlet format available to the public.

Drought-related Fishing Restrictions

Low water-flows and/or high water-temperatures on trout-bearing streams can stress fish to the point of mortality. This effect can be exacerbated when fish are caught by anglers. During these conditions FWP may implement the Angling Restrictions and Fishing Closure rule. This rule states that FWP can implement angling restrictions or closures with the approval of the Commissioner in whose district the restriction or closure is proposed. An *angling restriction* prohibits fishing during the period of day when water temperatures are highest, usually between the hours of 2 p.m. and midnight (commonly called "Hoot Owl" restrictions). The criteria for implementing an angling restriction are:

- 1) Daily maximum water temperatures that have reached or exceeded 73°F at any time during three consecutive days (60°F in the case of bull trout waters); or
- 2) Where stream or river flows fall to or below the 95% daily exceedance level based on hydrologic records for that waterbody; or
- 3) Water conditions meet criteria stated in a Drought Management Plan.

An *angling closure* prohibits fishing at all times of day, and the criteria to implement these closures include all of those mentioned above for angling restrictions, plus: 1) dissolved oxygen in the water is less than 4 parts per million (ppm) when measured before sunrise; or 2) other biological or environmental conditions exist that FWP determines have the potential to adversely affect the fishery. A drought-related angling restriction or closure remains in effect until September 15 of that same year, although FWP has the discretion to reopen the stream earlier if stream conditions improve and meet criteria listed in the rule.

Applicable laws, rules and policies

Statute

87-1-304: Authorizes the Commission to close any water or area for a limited period of time when necessary to protect spawning fish or prevent undue depletion of fish and wildlife.

Administrative Rule

12.5.501-509: Authorizes the Commission to implement angling restrictions or fishing closures. Types of closures and criteria for implementing closures and reopening waters is described.

Bait Regulations and Live Fish Transport

Live bait use is of particular concern to fisheries managers for the reason that it can serve as a vector for fish pathogens and Aquatic Invasive Species (AIS), and can unintentionally move new species of fish to other waters. The primary challenge with live bait use in Montana is providing clean sources of bait that minimize the risk of either AIS or pathogen introductions. Another challenge is preventing the over-harvest of native minnows while also providing bait fish for the angling public. Due to the risk of importing pathogens or AIS from out of state sources, no live bait fish may be imported into Montana except by permit for use in Big Horn Lake and Afterbay Reservoir. The majority of bait fish sold commercially is collected within the lower Yellowstone River drainage and could have unintended consequences to naturally occurring populations. Leeches may only be imported into Montana from FWP-approved leech dealers. Anglers who import leeches mush keep a receipt from the approved out-of-state leech dealer.

Description of current operations and/or areas of work

FWP bait regulations allow for a diversity of fishing opportunities while providing protection to the aquatic ecosystems. The bait regulations are widely varied across the three fishing districts, particularly for the use of live fish as bait and the transport of live fish. Bait regulations and live fish transport are typically most restrictive in the Western Fishing District and least restrictive in the Eastern Fishing District. In all Fishing Districts, live animals such as meal worms, red worms, night crawlers, leeches, maggots, crayfish, reptiles, amphibians, and insects may be used as bait on all waters not restricted to artificial lures only.

Special issues, challenges or initiatives

In 2012, additional bait restrictions, and restrictions on the movement of live fish, were adopted in some locations due to the presence of Eurasian watermilfoil (EWM), an invasive aquatic weed. Within EWM-contaminated areas, no collection of bait organisms can occur, and the transport of bait organisms and live fish from contaminated waters can only occur in clean water from an uncontaminated source. The new regulations were adopted to minimize the risk of transfer of EWM to new waters while still maintaining the use of bait minnows where currently allowed by fishing regulations.

Bait as a vector for AIS and fish pathogens has become an increasing concern throughout North America, especially with the spread of Viral Hemorrhagic Septicemia and Asian carp, both of which have been demonstrated to be moved around with live bait fish. Many states have changed bait regulations as a result of AIS or pathogen threats, including restricting where bait fish can be used, collected and transported. Many states are using "certified" bait fish from sources that have been tested for pathogens and AIS. Some states do not allow the transport of bait from the bodies of water where they were collected.

The concern in Montana is how to maintain the use of bait fish where currently allowed, while not increasing the risk of AIS or pathogen introduction or spread. An additional concern is the potential over-harvest of bait fish from some waterbodies. Additional restrictions might require the use of certified bait fish and/or prohibit the transport of bait from the body of water where the bait was collected. For many years there were two bait fish producers in the state that were considered certified for fish pathogens and AIS but to date they have not renewed their commercial license, leaving no certified in-state commercial sources for live baitfish.

Applicable laws, rules and policies

Statute

87-3-203: FWP may prohibit the use of small fish as bait. Gives rulemaking authority for FWP to insure an adequate supply of fish in waters regulated for the taking of bait fish, and to regulate fishing from boats or other floating devices and the use of fishing lures or baits in all waters of the state.

87-3-204: FWP may designate waters for the taking of minnows other than game fish variety by the use of a net (not to exceed 12 feet by 4 feet), and the taking of whitefish by nets or traps in the Kootenai River and tributaries (within one mile of the Kootenai River).

87-4-602: FWP shall keep a record of all seining licenses issued including the name, date of issue, and specified waters. A license may not be issued to a person whose license has been revoked.

87-4-608: Crayfish may not be taken from state waters (except private fish ponds) for sale or commercial distribution.

Administrative Rule

12.5.701-3: Restrictions for contaminated waters, includes bait use restrictions and transfer of fish and bait from contaminated areas.

12.7.201: Establishes the licensing requirements for seining any nongame fish (exceptions identified).

Hatchery System

FWP operates eleven fish hatcheries that produce a variety of sportfish and native fish. Hatcheries are classified as either broodstock or production, with some of the facilities having a vital role in native species restoration efforts. Broodstock facilities maintain mature adults that are spawned on station. The eggs are either shipped to production facilities for hatching and/or rearing, kept on-station and raised for production, or go into future broodstock year classes. Production facilities typically do not maintain any spawning adults, and are primarily used for producing fish for stocking out as either fry, fingerlings or catchables (fish longer than 7-inches).

FWP hatcheries maintain captive broodstocks for rainbow trout (Jocko River and Murray Springs), westslope cutthroat trout (Washoe Park), Yellowstone cutthroat trout (Yellowstone River) and largemouth bass (Miles City). Other sources for eggs and fish include wild populations in specific rivers, lakes and reservoirs, and private, state or federal hatcheries within and outside of Montana. Ten of the hatcheries are owned and operated by FWP. The Murray Springs Trout Hatchery is a mitigation hatchery owned by the US Army Corps of Engineers and operated by FWP. The Sekokini Springs hatchery is a mitigation hatchery funded by Bonneville Power Administration (BPS) and operated by FWP.

A relatively new addition to the hatchery program has been the production of reproductively sterile fish using a technique known as triploidy. Triploid fish are used in situations where a sterile fish are needed to prevent hybridization with native fish species. Stocking triploid fish protects the genetic integrity of wild fish populations and prevents the establishment of new breeding populations. Triploids have three sets of chromosomes instead of two, with the addition of a third set of chromosomes rendering the fish unable to reproduce. Only a small proportion of rainbow trout, westslope cutthroat trout and walleye eggs produced by the hatchery system are triploids; the majority of fish produced are diploids which are reproductively capable. Producing triploids adds additional challenges over the production of the normal diploid fish. To create triploids, the fertilized eggs are given a pressure shock which interrupts cell division during early egg development and causes the cells to retain a third set of chromosomes. Because of the pressure shock treatment and the additional handling required, the survival rate and quality of triploid eggs is typically lower than that of diploids. Research is ongoing to determine the performance of triploids in the hatchery environment and in the wild.

Description of current operations and/or areas of work

For ponds, lakes and reservoirs, hatchery-produced eggs and fish are used to provide or enhance recreational fisheries. Where there is no natural reproduction, or where there is no recruitment to support a fishery, hatchery fish of appropriate species are stocked to provide a fishery. In waters where natural recruitment is insufficient, hatchery fish are used to augment sportfish populations. Hatchery fish are frequently used to restore sportfish populations that have been locally extirpated by various causes (e.g. drought, winter or summer kill, or chemical removal).

Montana hatcheries are crucial components in the restoration of many of Montana's native fish species. Restoration efforts for Yellowstone cutthroat trout and westslope cutthroat trout, Columbia River redband trout, pallid sturgeon, sauger, and Arctic grayling rely on Montana hatcheries for eggs and fish from captive and wild broodstocks.

Montana hatcheries are also a primary resource for informing and educating the public about fisheries issues. Many hatchery visitors do not participate in fishing or hunting, and their visit to a hatchery is their only contact with FWP. Additionally, a hatchery may be their only opportunity to interface with, observe, and appreciate live fish. Hatchery displays and personnel provide information to visitors about FWP's fish and wildlife management activities and conservation issues. Visitor centers, aquariums, living stream displays and other exhibits educate the public about hatchery history, fish culture, species diversity, limnology, aquatic ecology, and environmental issues. Hatcheries are also important sites for educating school and civic groups.

Overview of the State Fish Hatcheries

Big Springs Trout Hatchery

Located seven miles south of Lewistown, Big Springs Trout Hatchery is currently the largest FWP salmonid production facility. The hatchery is composed of an upper unit on land leased from the City of Lewistown and a lower unit on FWP land. The current annual production of over 1.8 million fish includes five species: rainbow trout, brown trout, Yellowstone cutthroat trout, Arctic grayling, and kokanee salmon.

Bluewater Springs Trout Hatchery

Located seven miles east of Bridger, Bluewater Springs Trout Hatchery is an FWP production facility, which produces up to 1.5 million fish annually. Species of fish produced typically include three strains of rainbow trout, Yellowstone cutthroat trout, and Arctic grayling.

Flathead Lake Salmon Hatchery

The Flathead Lake Salmon Hatchery is located on FWP land on the northwest shore of Flathead Lake, near Somers. The primary activity is the collection and incubation of wild kokanee salmon eggs to meet an annual statewide kokanee requirement of approximately 2 million salmon. It shares the production and distribution of these salmon with other hatcheries. Over 1 million fry are raised and distributed annually. The hatchery is also involved with the incubation and distribution of Arctic grayling and westslope cutthroat trout.

Fort Peck Fish Hatchery

The Fort Peck Fish Hatchery is owned by the U.S. Army Corps of Engineers but staffed and operated by FWP. Opened in the spring of 2006, this facility is capable of rearing a wide variety of warm-water and cold-water fish including walleye, northern pike, rainbow trout and Chinook salmon. The facility has 64 indoor rearing tanks and incubation capacity for up to 125 million walleye eggs and 500,000 Chinook salmon eggs. Forty outdoor ponds are used in the spring and summer for raising fingerling warmwater fish, and 8 outdoor concrete raceways are used for rearing fall-released Chinook salmon and rainbow trout. On average, annual production includes 125,000 rainbow trout, 144,000 Chinook salmon, 14 million walleye fry, 1.7 million walleye

fingerlings (goal is 2 million), 5 to 10 thousand advanced walleye fingerlings, and 1.5 million northern pike.

Giant Springs Trout Hatchery

Located adjacent to Giant Springs State Park north of Great Falls, Giant Springs Trout Hatchery is an FWP production facility. Annual production includes 3 strains of rainbow trout (about 600,000 total fish) and brook trout (about 41,000 fish).

Jocko River Trout Hatchery

Located in Arlee, the primary activity at the Jocko River Trout Hatchery is to maintain the Arlee strain domestic rainbow trout broodstock. Triploid Arlee rainbows are also produced here. Production and distribution is shared with other FWP hatcheries. Annual rainbow production is typically 260,000 fingerlings and 1,350 depleted brood fish.

Miles City Fish Hatchery

The Miles City Fish Hatchery is located 2 miles southwest of Miles City and is one of two FWP warm-water and cool-water hatcheries. On average, annual production includes 3,000 juvenile pallid sturgeon, 10 million walleye fry, one million walleye fingerlings, 5 to 10 thousand advanced walleye fingerlings, 350,000 northern pike fingerlings, and 325,000 largemouth and smallmouth bass fingerlings. The hatchery receives walleye and northern pike eggs from the Fort Peck hatchery and maintains resident largemouth and smallmouth broodstocks. The Miles City Hatchery is also a spawning facility for captured wild, adult pallid sturgeon.

Murray Springs Trout Hatchery

The Murray Springs Trout Hatchery near Eureka is operated as a State Fish Hatchery and is included in the Montana Hatchery System for planning purposes; however, Murray Springs Trout Hatchery is owned by the U.S. Army Corps of Engineers and is operated as a mitigation facility under contract. All funding for operating the hatchery comes from the Corps of Engineers. Its primary activities involve the production and distribution of rainbow trout as partial mitigation for the loss of habitat associated with the impoundment of the Kootenai River into Lake Koocanusa by Libby Dam.

Rose Creek Hatchery

Rose Creek Hatchery (a satellite facility for Flathead Lake Salmon Hatchery) became fully operational in 2011/12. The primary activity is the incubation and production of kokanee salmon, Artic grayling and westslope cutthroat trout.

<u>Sekokini Springs Hatchery</u> was a private trout hatchery built in the 1950s on Forest Service land operating under a Special Use Permit (SUP). In 1998, FWP bought the building and the SUP, with the Forest Service retaining ownership of the land. The property includes rearing ponds located below the hatchery building and springs which supply gravity fed water for operation. Currently, the hatchery furnishes purebred Westslope cutthroat trout for mountain lakes in the South Fork Flathead drainage that have been treated to remove hybrid trout populations. It also is used for research, education, and public outreach.

Washoe Park Trout Hatchery

Located adjacent to the city limits of Anaconda, the main function of the Washoe Park Trout Hatchery is to maintain and enhance Montana's captive westslope cutthroat trout broodstock and supply eggs to various in-state and out-of-state agencies (approximately 500,000 eggs are kept onsite and one million are shipped to other hatcheries). Production and distribution of cutthroat are shared with other FWP hatcheries. Annual westslope cutthroat production includes 165,000 fry, fingerlings, and depleted brood. Washoe Park produces some triploid westslope cutthroat trout for stocking situations where a sterile fish is preferred, mostly in areas of native species restoration efforts. Washoe Park is also involved with research efforts including the comparison of performance between diploid and triploid westslope cutthroat trout.

Yellowstone River Trout Hatchery

Located adjacent to Big Timber, the Yellowstone River Trout Hatchery's main purpose is to maintain Montana's captive Yellowstone cutthroat and Big Hole river fluvial Arctic grayling broodstocks, and provide eggs and fish to meet fisheries management objectives. It shares production and distribution with other hatcheries. Approximately 100,000 fish are stocked annually.

There are two US Fish and Wildlife Service (USFWS) fish hatcheries in Montana in Creston and Ennis. The State Fish Hatchery Bureau works closely with the federal hatcheries to reach Montana production goals. The federal facilities are primarily responsible for stocking federal waters. Ennis National Fish Hatchery is a brood facility that plays a critical role in providing state fish hatcheries around the country with rainbow trout eggs. The Creston National Fish Hatchery primarily provides trout for fisheries management activities on Tribal waters and for mitigation purposes, and also produces bull trout eggs and fry for research purposes.

There are multiple commercial private fish hatcheries in the state. These operations have been permitted by FWP to sell live fish to authorized sources, primarily private fish ponds that have been permitted for fish stocking.

Special issues, challenges or initiatives

The annual production of fish by FWP fish hatcheries varies depending on spawning success and fisheries management requests, but typically produce 45 million warmwater fish and 8.4 million coldwater fish. Most of the warmwater fish are stocked as fry, thus total warmwater production amounts to less than 5,000 pounds of fish. Annual total weight of coldwater species typically exceeds 300,000 pounds.

Operational costs for fish food, fish distribution, and utilities are escalating at a rate greater than annual hatchery budget increases. Because individual hatchery programs must absorb these increased costs, hatchery managers strive to provide the same level of production within their allotted budgets by foregoing maintenance and improvement of their facilities.

Fish food for the entire hatchery system costs approximately \$300,000 per year, which is 25% of the annual hatchery operations budget. The cost of fish food is primarily determined by the fishmeal commodities market. World demand for fishmeal and fish oil is increasing while annual harvest of meal-producing fish is decreasing. The increases in fish food costs are

occurring as requests for larger hatchery trout are increasing. To maintain popular trout sport fisheries in waters with introduced predatory fish species, fisheries managers are using larger fall-stocked trout, rather than or in addition to, smaller spring-stocked trout.

In addition to increases in fish food costs, energy costs for transportation (diesel and gasoline) and hatchery utilities (electricity, natural gas and propane) have risen dramatically and are expected to continue to remain elevated relative to prior years' costs. The hatchery bureau is taking action to minimize its expenditures for energy. A project is underway to reduce pumping costs at the Fort Peck hatchery. The hatchery currently relies on electric pumps to bring water to the hatchery. The collection gallery that provides this water is currently failing and does not provide adequate water for the facility. FWP is working with DEQ to tie the hatchery water supply to the Fort Peck dam penstocks allowing gravity water to supply the facility.

FWP's hatchery bureau strives to produce the best product to meet the fisheries management goals for specific waters throughout Montana within the confines of relatively fixed budgets and increasing economic pressures. This requires the careful management of hatching and rearing space, species and strain selection, water temperatures, growth rates, diets, feed rates, fish health, transportation and budgets. Most of FWP's hatcheries select the egg sources for the various strains and species they produce, incubation temperatures, and growth rates to allow multiple cropping of raceways, a technique that allows them to raise more than their hatchery's carrying capacity.

Hatchery personnel continuously monitor the health and feed use of their fish to reduce the incidences of fish health problems and optimize feed utilization. Fish stocking schedules are carefully managed to minimize stocking trips and to use the most efficient fish transport vehicle. Personnel, resources and specialty equipment are routinely shared among the hatcheries to accomplish tasks beyond the means of an individual hatchery. Finally, hatchery personnel maintain open communication with biologists and fish managers to monitor the performance of fish post-stocking and work with biologists and managers to determine the best species, strain, stocking numbers, stocking size, and stocking time to optimize survival and eventual return to creel.

Applicable laws, rules and policies

Statute

87-1-201: The department shall supervise all the fish of the state and to enforce the fish and game laws for protection, preservation and propagation of fish. The department may spend for the protection, preservation, and propagation of fish.

- 87-1-301: The FWP Commission shall set the policies for the protection, preservation, and propagation of fish, nongame species, and endangered species of the state.
- 87-3-225: Provides FWP authority to inspect fish hatcheries or culture facilities for the presence of pathogens.
- 87-3-226: Requires hatchery and culture facilities to report the presence of fish pathogens.

- 87-3-227: Assigns liability for damages resulting from diseases to the violator. Damages may be recovered by a person, firm, corporation, or FWP.
- 87-3-201: Gives the department authority over hatcheries and for the taking of eggs.
- 87-4-606: Identifies the conditions for acquiring and renewing pond licenses.
- 87-4-601: Makes it unlawful for any person (other than FWP) to sell any game fish or the eggs or spawn from any game fish. Exceptions are identified in the statute.

Administrative Rule

- 12.7.506: Disease inspection and quarantine procedures for hatcheries and culture facilities.
- 12.7.901: FWP may sell eggs from its brood stock only when the eggs are surplus to its needs and when the eggs are certified disease free and are not available from private sources within the state. Eggs from natural runs will not be sold.
- 12.7.601: General Administrative Rules for fish planting.
- 12.7.602: Stream planting rules, including restrictions pertinent to impacts on wild fish populations.
- 12.7.701: Provides authorization for FWP and commercial fish planting (if approved by FWP) of specific fish species, lists specific species which are approved for introduction.

Departmental Policies

Hatchery Stocking, Policy. Provides direction regarding the stocking of excess or unallocated fish from the hatchery system.

Fish Stocking into Waters that Require an Environmental Assessment, Policy. Provides direction regarding fish stocking into waters that require an environmental assessment.

Walleye Stocking, Policy. Provides direction regarding walleye stocking beyond their existing range in Montana.

Unauthorized Placement of Fish

Historical fish distribution in Montana was determined by the retreat of the glaciers about 10,000 years ago. When Europeans appeared in Montana 150 years ago they started introducing and moving fish for various reasons, primarily for food and commerce. In the 1970s biologists started to recognize that many of these early introductions had significant negative impacts on existing and native fish populations. Introductions of fish are now tightly regulated by FWP but, the pioneer spirit lives on in some anglers who illegally introduce fish through "bucket biology"—the unauthorized placement of fish into or between private or public waters of Montana. The illegal introduction of fish can also involve the introduction and spread of aquatic pathogens, invasive species and aquatic weeds.

Introduced fish can prey on or compete with native or other recreationally important fish. Due to biological carrying capacity, illegal introductions can come at the expense of existing fisheries. Illegal fish can also be a source of disease pathogens and may alter aquatic habitat or water quality. The net effect is reduced fishing opportunity and increased cost for mitigation. Some introductions are accidental or unintentional. In addition to illegal introductions of sport or forage fish, other examples of unauthorized introductions include the release of bait fish or the escapement of fish from private ponds.

FWP has now documented more than 600 unauthorized fish introductions into more than 250 waters, involving every drainage in the state. Many more have probably occurred that have gone undetected. Fifty different species of fish have been illegally introduced.

Prevention is the best solution. Once an unauthorized fish population is established it may be very expensive or impossible to eliminate. Anglers need to report illegal activities through programs like 1-800-TIP-MONT that allow tipsters to remain anonymous and receive rewards. The 2011 Montana Legislature increased the penalties for illegal and unauthorized introductions of fish. Persons convicted now face a fine of not less than \$2,000 or more than \$10,000. They may also be liable for restitution for damages or restoration or be sentenced to up to a year in prison and lose hunting and fishing privileges for at least 5 years.

Guided by Administrative Rule and Policy, FWP has a series of actions to be taken after discovery of an unauthorized introduction. Within 30 days of discovery of an unauthorized introduction the Department will evaluate immediate and long-term management objectives for the unauthorized species. The management actions are based on a risk and feasibility assessment that considers the risk of expansion to surrounding or connected waters, the current distribution of the unauthorized species and the proximity of those populations to the new placement, the probability that the species will survive and propagate, the potential impact on the existing fishery, and the immediate and long-term economic impact to the department and the public. Eradication or suppression of the unauthorized species will be attempted if the risk and feasibility assessment deem such effort practical and necessary. Management actions could include discontinued stocking of a water body, modifying bag limits to suppress the unauthorized species, closing a water body to all fishing, denial of fishing contests or modifying fishing contests for catch and kill, commercial harvest or harvest incentives, or physical control measures such as use of barriers, habitat manipulation, or removal of fish. Revisions of management actions can be modified if necessary but must include rationale for the change in action. Any revisions to management actions will be reported to the Commission.

Applicable laws, rules and policies

Statute

87-5-601: Fish and Wildlife Crimestoppers (TIP-MONT program)

87-5-713: Control of Wildlife Species Permitted to be Transplanted or Introduced

87-5-721: License and Permit Revocation and Denial

Administrative Rule

12.7.15: Unauthorized Placement of Fish

Departmental Policies

Illegal and Unauthorized Introduction of Aquatic Wildlife, Policy. The purpose is to clearly state the approach for dealing with illegal and unauthorized introductions of aquatic species. For purposes of this policy aquatic species include any fish, insects, crustaceans, mollusks or other species requiring aquatic habitat to complete its life cycle.

Fish Health

The introduction of potentially harmful fish pathogens and disease into both captive and wild fish populations within Montana can have long-lasting, detrimental effects. The goal of the fish health program is to prevent the introduction and spread of these dangerous organisms both into and within the state, and to help better understand and reduce the impacts of these diseases where they are present.

Description of current operations and/or areas of work

Any time live fish, eggs, or dead fish parts are moved between waters there is a risk of inadvertently moving harmful disease-causing organisms. To minimize those risks, hatchery and wild fish are routinely screened for certain pathogens to reduce the likelihood of moving them. Wild fish are tested before being moved to other waters, and all state, federal and private hatcheries are tested annually. Live fish imports from out of state are reviewed and import permits are issued to help reduce the risk of introducing pathogens with imported fish. The FWP Aquatic Health Advisory Committee (AHAC) reviews management actions that are considered high risk for spreading harmful pathogens. Diagnostic examinations are conducted where problems do occur to determine and document the cause and extent of the problem.

Special issues, challenges or initiatives

Myxobolus cerebralis, the parasite that causes whirling disease, was discovered in Montana in the mid-1990's. Since then it has become widespread in the state and has had significant impacts on numerous fish populations. Viral Hemorrhagic Septicemia (VHS) was discovered in the North American Great Lakes in 2004. While it has not been detected and is not believed to be present in Montana, it has had significant impacts on many FWP fisheries programs. Tetracapsuloides bryosalmonae, the parasite that causes Proliferative Kidney Disease (PKD), is present in the State and was responsible for a significant die-off of mountain whitefish in the Yellowstone River in 2016..

The live transport of fish between states can result in the introduction of diseases that can significantly impact fish populations. The Fish Health program is dedicated to the protection of Monana's fishery resources through the identification and prevention of these diseases.

Applicable laws, rules and policies

Statute

87-3-210 –26: Fish Importation Statutes

Administrative Rule

12.7.501 –7: Fish Disease Certification and Importation Rules

Departmental Policies

Fish Health Policy. Aids fisheries managers in implementing fish health programs to insure fish health, prevent disease and reduce the spread of fish pathogens in Montana.

Wild Fish Transfer Policy. Provides direction to ensure that movement of wild fish by FWP personnel is compatible with overall stewardship of Montana's fishery resources.

Permitted Commercial and Private Activities

FWP regulates a number of commercial and private activities related to fish and other aquatic resources. The FWP website includes more details on the permitting process and the dollar amounts for those that are subject to a permit or license fee. The following is a summary of these activities and the license or permits required. Consult the Access and Recreation Management section of this Guide for more information on commercial use of fishing access sites and waterbodies.

Bait Collection (license and fee required)

FWP has the authority to regulate the use of fish as bait (87-3-203, MCA). Bait fish collection and use (for both private and commercial purposes) is allowed throughout the state but with varying restrictions depending on the fishing district, as described in the fishing regulations booklet. The Commission (under authority of 87-3-204, MCA) may designate waters where commercial fishing (including bait collection) may occur. A license is required for bait collection (ARM 12.7.201 through 203). A bait fish seining license is required of someone who seines for, and has in his/her possession, more than 24 dozen non-game bait fish, and for persons 15 years of age and older who are seining and transporting bait fish for commercial purposes.

Commercial Fishing (license required)

The commercial sale of fish or spawn is authorized under 87-4-601 et seq. (MCA), including paddlefish roe, nongame fish, whitefish, crayfish and mysis shrimp. This statute and ARM 12.7.1001 et seq. describe the circumstances and process by which paddlefish roe can be obtained at the Intake Dam Fishing Access Site and sold by a nonprofit organization. The nonprofit corporation is currently the Glendive Chamber of Commerce. Whitefish may be taken commercially by hook and line for sale in the Flathead River north of Flathead Lake, in Flathead Lake north of the Flathead Reservation boundary, the Fisher River, Kootenai River and Whitefish Lake. Whitefish, along with nongame fish, may also be harvested for sale through the use of nets or traps from the Kootenai River or its tributaries within one mile of their mouths as authorized by ARM 12.7.101 et seq.

Fishing Contests, a.k.a. Fishing Derbies (permit required, fee varies)

A permit is required to conduct a fishing contest on Montana waters where FWP has jurisdiction (12.7.801 et seq., ARM). The rules define a "fishing contest" as any event where an entry fee is charged or where people are expected to, or do, compete for prizes or cash based on the capture of individual fish or combinations of fish. Contests involving fewer than 30 people or merchandise worth \$500 or less do not require a permit but must comply with contest provisions. Contest applications may be denied for a variety of reasons including if there is significant public opposition, detrimental impacts on fish populations, or conflicts with other fishing or recreational interests for host waters. FWP may also place conditions on permits to alleviate issues such as those described above. Contests involving species of special of special concern are prohibited, with the exception of lakes and reservoirs stocked with Yellowstone cutthroat trout or westslope cutthroat trout. Contests involving wild trout in rivers and streams are also prohibited, as are contests on holiday weekends. Fees may be applied to contests using FWP fishing access sites or State Parks.

Hoop Net Fishing (permit required)

Hoop net fishing is only allowed in the Eastern Fishing District by licensed resident anglers with a permit. Permit applications and rules are available at the FWP Regional offices in Billings, Miles City and Glasgow. The rules specify the size and construction of allowable nets, the species and numbers of fish that may be kept, the seasons and locations of open areas to hoop net fishing, and reporting requirements.

Private Fish Ponds (permit and application fee required)

Based on state law first passed in 1945, (MCA 87-4-601 et seq.) FWP administers private fish pond licensing. This law and the accompanying FWP Private Pond Stocking Policy (approved August 30, 2002) allow the stocking of private fish ponds while ensuring that public resources are not adversely affected by unwanted fish or fish diseases, that aquatic invasive species are not planted into ponds where they can escape or be introduced into state waters, and that the habitat of wild fish is not harmed.

Any person who owns an artificial lake/pond or a natural lake/pond smaller than 500 acres with a tributary that doesn't support fish may apply to FWP for a permit. FWP cannot issue fish stocking permits until it is certain that legal water rights exist (if needed) for the pond or reservoir. Owners are not permitted to stock fish ponds that are likely to flood, and on-stream ponds are not permitted unless it can be demonstrated that there is no threat to game fish or native species of special concern in adjacent waters. FWP has the authority to designate the species of fish that may be stocked into the pond and may condition any permit to require construction and/or maintenance of devices to ensure there will be no escape of fish. The Pond Stocking Policy provides more specific guidance on circumstances where stocking of non-native trout species is permissible, under the general philosophy that such stocking is permissible if it is expected to have minor or no additional impact to native fish species, or important non-native sport fisheries. As an example, the stocking of rainbow trout in private ponds within tributary drainages that support or are connected to habitats that support westslope or Yellowstone cutthroat trout will not be allowed due to the risk of genetic hybridization.

Scientific Collections (permit and fee required)

It is lawful, under Montana statute (87-2-806 MCA) and rule (12.7.1301 ARM) for a representative of a school, college, university, government agency, or an individual, to collect fish for the purpose of a scientific investigation. To do so, they must apply for a permit and in the application they must describe the purpose of the collection, collection methodologies, and qualifications of those who will be doing the collecting. Based on the application, FWP may issue a permit without restrictions or may place special conditions on the permit such as restrictions on the time or location of the collections. FWP may also deny a permit if the applicant is not qualified, the proposed collections are not necessary, the method of collection is not appropriate, or if the collecting may threaten the viability of the species. The permittee is required to provide FWP with data collected under authority of the permit. In recent years, FWP has issued about 40 permits annually, mostly to universities and state and federal agencies, but also to consultants.

Youth and Family Fishing

FWP has several programs designed to help expose young anglers to the sport of fishing and to provide locations for them and their families to enjoy fishing. The Aquatic Education Program (within the Communication and Education Division) sponsors the "Hooked on Fishing- Not on Drugs" (HOF) program, which was developed nationally by the Future Fisherman Foundation. Begun in 1996, HOF is conducted in nearly 200 Montana classrooms annually involving about 2,500 students. The primary objectives of this program are to: (1) help students develop awareness and appreciation for the fish and aquatic resources in Montana; (2) help students develop an interest in fishing and outdoor recreation; (3) teach safe and responsible outdoor skills; and (4) help teachers develop skills and interest in teaching natural resource topics. Students take part in a variety of activities, both inside and outside the classroom.

The role that families and parents play in teaching their children about fishing and fostering a lifetime interest in the out-of-doors cannot be over stated. To help facilitate and develop these interests and values, FWP has programs to provide fishing opportunities for children and families. The Free Fishing Weekend is based on a law passed by the Montana Legislature in 2011 which allows for anyone to fish for free (without a license) on Father's Day weekend every year, as a way of providing an inexpensive way for families to enjoy the weekend together. FWP also manages two types of family-friendly fishing waters for young anglers. The first type is Children's Fishing Waters, which are ponds set aside exclusively for kids 14 years of age and younger to fish. The second type is Family Fishing Waters, where adults can fish as well, but only kids (14 years and younger) can harvest a fish. Usually FWP stocks these ponds annually with catchable sized rainbow trout.

Applicable laws, rules and policies

Statutes

87-2-311: FWP will allow a person to fish for any fish within the state without obtaining a fishing license each year on Father's Day weekend as long as the person does so in accordance with all other laws or regulations the department has in effect on that weekend.

Aquatic Habitat Program

Aquatic Habitat Program Goals

As outlined in the FWP Vision and Guide 2016-2026, the overarching commitment of the Fisheries Aquatic Habitat Program is:

Conserve, protect, and enhance fish and wildlife populations, their habitats, and the public's opportunity to enjoy them.

Actions to attain this goal include:

- Restore, maintain, and protect native species and their habitats.
- Improve and protect fish and wildlife habitat so that high-priority areas are conserved and connected at a landscape level.

Specific strategies and examples for each action and their relationship with the resource management goal are outlined throughout the discussion below.

Background and Description

Aquatic habitat consists of three essential elements: 1) water quantity—water flow in streams/rivers and water levels in lakes and reservoirs; 2) water quality—temperature, chemistry, pollutants, and suspended solids; and 3) physical habitat features—landscape features such as streambeds and banks, riparian areas, cover, lake reservoir depth, spawning structures/substrates, etc. Montana is fortunate to have a wide variety of aquatic habitats supporting an array of cold, cool and warm water species. Some of the specific threats to aquatic habitats in Montana include:

- Climate change with its consequent water quantity and quality changes.
- Increasing competition for a limited, and often diminished, supply of surface water, and its affect upon instream flows.
- Increasing development that is associated with increasing human population growth, especially where it represents encroachment upon and demand for development of stream corridors and other important aquatic resources.
- Development of natural resources, such as oil and gas, with accompanying impacts on groundwater and surface water quantity and quality.
- Overgrazing of streamside vegetation and trampling of streambanks.
- Fish passage obstruction and fish entrainment into irrigation ditches.
- Unmitigated dam operations.

The aquatic habitats in Montana are in relatively good condition. However, some portions of aquatic habitats have been degraded because of land-management practices and other human activities. Current and projected human uses of the environment have the potential for degrading existing habitats even further. FWP has the ability, technology, and obligation to protect and restore these habitats wherever possible. To achieve the habitat action items identified in the

Vision and Guide, there are five focal areas of the habitat program: instream flow protection, fisheries mitigation, water quality protection, habitat restoration grant programs, and stream permitting. Achieving the habitat goals often transcends the limits of FWP's own funding sources. Nearly all that FWP achieves within the habitat program relies upon the cooperation and collaboration of other agencies, non-governmental organizations, and the public.

Instream Flow Protection

The purpose of FWP's Instream Flow Protection efforts is to physically and legally protect, restore, and manage the instream flows required to sustain Montana's aquatic species, their habitats, and related ecosystems with focus on the increasing competition for the water resources, limited supplies and changing hydrologic conditions. Associated goals include:

- Restore and maintain adequate water flow in streams and satisfactory water levels in lakes and reservoirs.
- Provide education and information to the public about the importance of instream flows and lake level protections and the policies used to provide for and protect them.
- Conduct education and training for FWP staff regarding water measurement data collection and management and flow restoration strategies.
- Monitor instream flow leases and purchases for fisheries impact and importance.

Description of current operations and/or areas of work

To restore and maintain adequate water flow in streams and satisfactory water levels in lakes and reservoirs, FWP has the following objectives:

- Protecting FWP's existing instream water rights and water reservations through active participation in the water adjudication process and the water right permitting process, and through enforcement of water right priorities;
- Enhancing stream flow in priority, dewatered streams through water leasing, donations, purchase, market transaction, and other voluntary means;
- Enhancing reservoir and run of the river management procedures such that the regulation of water flow in streams and water levels in lakes and reservoirs meets not only the owner's purpose but also benefits, or minimizes impacts to, fish and other aquatic life;
- Protecting and enhancing stream flows and lake and wetland levels in priority areas through collaborative community or watershed groups;
- Implementing the instream-flow assessment program to validate native and ESA species recovery and obtain additional water reservations on priority streams and rivers; and
- Acquiring senior water rights or new water reservations to maintain or protect water flow in streams and water levels in lakes or other water bodies.

Special issues, challenges or initiatives

The greatest long-term challenge is the ever increasing demand for water in the arid west, coupled with increased variability in water supplies. FWP will face greater threats to instream flows and lake levels and must be well-positioned to meet this threat by defending FWP's water

rights, while also actively working to help develop a strategy that meets the increasing demand for water and protects instream flows and lake levels.

Maintaining instream flows are even more important with increased temperatures associated with climate change. Warmer waters can force coldwater species higher into stream drainages in search of thermal refuge, while warmwater species distribution may expand into reaches historically inhabited by coldwater species. Protecting and enhancing instream flows can mitigate this effect, as increased water quantity typically improves water quality and moderates temperatures. Fisheries monitoring will play an important role in monitoring species distributions and identifying priority habitats for maintaining instream flow.

Applicable laws, rules and policies

Statute

Title 85: The Montana Water Use Act governs water reservation, including the defining flow or lake levels, changes in water use that provide for instream flows (both temporary leasing and permanent), the general stream water-right adjudication, and permitting and development of new water rights.

Fisheries Mitigation

State and federal laws and policies were established to mitigate damages to fish and wildlife caused by dams, diversions or mining. Federal and private dams and water diversions control water elevations, flow patterns and environmental conditions (e.g. water temperature, oxygen, water velocity, gas saturation, habitat quality, nutrients, food production etc.) that affect fish survival and growth. Impacts can include:

- Dams and diversions often block fish migrations, isolating populations above, below, or between barriers.
- Fish and aquatic life wash through turbines and spillways.
- Aquatic habitat is damaged when reservoirs are drawn down to a fraction of their capacity and/or fluctuate significantly on a regular basis, and when streams are dewatered, channelized or contaminated.
- Reservoirs fill with sediments, reducing storage capacity and recreational opportunities.
- Unnaturally fluctuating river flows cause stream banks to collapse, erode soils, and overwiden stream channels resulting in reduced biological productivity.
- Streamside vegetation may be left high and dry along regulated river reaches, inhibiting new seedlings and causing a long-term loss of riparian habitat.
- Mining activity may physically destroy stream channels and habitats due to efforts to remove overburden or orebodies. Mining wastes deposited in stream channels or metals leached from adits or heap leach piles may also be toxic to aquatic life.

Mitigation programs use applied research to understand limiting factors and implement on-theground actions to perpetuate self-sustaining fisheries, often with emphasis on preserving native fish assemblages. Actions taken are designed to optimize ecosystem function, health and resilience, and to achieve specific mitigation goals, including modifying dams and operations to restore more natural conditions in impoundments and streams, and improve fish passage to benefit the fisheries upstream and downstream of dams. Where mitigation cannot be accomplished onsite, projects may be implemented in surrounding areas (offsite mitigation). Progress toward mitigation goals is often tracked by first establishing a "loss statement" of habitat and fisheries impacts caused by the disturbance, such as construction and operation of a dam or mine, and then monitoring success as corrective measures are implemented.

Description of current operations and/or areas of work

Water control operations are dictated by potentially conflicting demands for power generation, flood management, navigation, irrigation, recreation, water supplies and other human concerns. Prior to dam installation, the natural hydrologic cycle (annual hydrograph) in Montana's rivers included high spring flows during snow melt (typically May through June) and a stabilized, low flow period throughout the remainder of the year. Water regulation essentially reversed this natural flow pattern by storing water during spring runoff (to reduce flood risk) and releasing stored water later during the year for other purposes, such as irrigation, power generation, navigation or water supplies. Fisheries and habitat are often affected negatively when the natural hydrograph is changed. Water control operations can cause river discharges to fluctuate unnaturally, and when reservoir drawdowns are followed by refill failures, biological productivity in the reservoirs can be impacted.

Fish growth is best when reservoirs remain near full pool during the most biologically productive period of the year, summer through fall. At full pool, reservoirs contain the maximum volume of optimal temperature water for forage and fish growth and a large surface area for the deposition of insects from the surrounding landscape, an important food source for fish during summer and fall. Food availability is reduced when the reservoir surface shrinks and water recedes from shoreline vegetation. Reduced reservoir drawdown protects aquatic food production, ensuring an ample springtime food supply for fish. The shallow areas near shore (littoral zone) are the most productive and, therefore, it is important that they remain wetted during the warm months.

Outflows from dams affect all aquatic life. Fisheries in rivers downstream of the dams can be enhanced by restoring a naturally-shaped flow pattern, including a spring run-off event, followed by gradually declining flows through summer and fall. Instream flow requirements and limits to flow fluctuation have been established to support stream life and restore natural floodplain functions. Spring flushing flows clean fine sediments from river gravels and define channels, creating a healthy environment for fish and their food supply, and remove tributary deltas that can impede spawning runs. Rapid flow reductions are especially damaging when a large portion of a riverbed dries out, often stranding insects, zooplankton, fish and fish eggs. It takes over a month and a half for aquatic life to rebound after a single low flow event.

Fisheries can be improved by working with dam owners to implement physical improvements to dams and diversions, and operating rules for water regulation to optimize potential benefits. Computer models of Hungry Horse and Libby dams helped FWP recommend dam operations that balance fisheries needs in the reservoirs and rivers downstream with power generation, flood management and irrigation. Operating rules limit the duration and frequency of deep reservoir drawdowns, improve reservoir refill, and produce a more natural dam discharge patterns.

Hydropower mitigation projects are underway in the Columbia River headwaters, including the Flathead and Kootenai subbasins. FWP and the Confederated Salish and Kootenai Tribes (CSKT) quantified fish and habitat losses attributable to the construction and operation of Hungry Horse Dam. A similar collaboration with CSKT and the Kootenai Tribe of Idaho (KTOI) documented losses attributable to the construction and operation of Libby Dam. Fisheries Mitigation and Implementation Plans culminated in Subbasin Plans that were adopted by the Northwest Power and Conservation Council (NPCC). Mitigation projects addressing fisheries impacts at each federal dam are prioritized in the Flathead and Kootenai Subbasin Plans. The Bonneville Power Administration (BPA) funds these mitigation programs to offset fisheries impacts caused by inundation, deep reservoir drawdowns, refill failures, and unnatural flow fluctuations. Computer models of the reservoirs and rivers in the Kootenai and Flathead watersheds were used to develop "Montana Operations", which were fully implemented in 2009 to balance fisheries needs with flood management, power generation and other water uses. Similar computer models were developed for Missouri River dams, Yellowtail Dam on the Bighorn River and Fort Peck Dam in the Missouri Basin.

Montana Operations fit within the overall systemwide operation of Columbia Basin dams. The Columbia River Treaty (Treaty) was signed by the United States and Canada in 1961 to coordinate flood management and hydropower benefits in the entire watershed, and must be renewed, modernized or terminated by 2024 when existing flood management and power revenue provisions sunset. The two nations are currently negotiating refinements to the Treaty. Both nations want to include ecosystem function to the original Treaty objectives, power generation and flood management. The U.S. Entity (Bonneville Power Administration and U.S. Army Corps of Engineers) collaborated with Pacific Northwestern states, tribes, and stakeholders during a multi-year analysis of systemwide Treaty operations after 2024 called the Columbia River Treaty Review. The Montana Operations at Hungry Horse and Libby dams proceeded unchanged in the Pacific Northwest's "Regional Recommendation" that the U.S. Entity submitted to the U.S. Department of State in 2013. Montana is currently pursuing additional refinements to the Montana Operation during the ongoing, 5-year Columbia River System Operation Environmental Impact Statement process.

FWP also provides recommendations concerning hydropower operations during the Federal Energy Regulatory Commission (FERC) relicensing negotiations, planning efforts and recommendations concerning activities of agencies other than FWP, comments on environmental documents and additional participation in various environmental stewardship collaborations.

Fisheries mitigation for mine related activities are ongoing. Mine-related fisheries mitigation actions are currently being taken in the upper Clark Fork drainage to remediate the harmful effects of mine wastes deposited in the upper Clark Fork Drainage, including removal of the Milltown Dam. Made possible through the Natural Resource Damage Claim by the State of Montana against Atlantic Richfield Company, there is now roughly \$24 million that has been set aside to restore aquatic habitats and fish populations in the mainstem and major tributaries above Milltown Dam. Restoration has been continuing since the early 2000s, but there is one remaining Operable Unit (Warm Springs Ponds) that has yet to have a cleanup plan developed and approved by the EPA.

Special issues, challenges or initiatives

Dam operations are modified to recover fish species listed as endangered or threatened under ESA, and to benefit other important fisheries. The endangered Kootenai white sturgeon have prompted operating requirements (sturgeon-tiered flows) at Libby Dam. Seasonal flow restrictions were established at Hungry Horse and Libby dams to benefit threatened bull trout. Operations at Fort Peck dam have been modified to help recover endangered pallid sturgeon. Research is underway in the Missouri River downstream of Fort Peck Dam to install a selective withdrawal device to control dam discharge temperature and restore more natural flows to help restore endangered pallid sturgeon and 50 other important fish species. FWP collaborated with the US Bureau of Reclamation (BOR) to implement new operating criteria for Yellowtail Dam to benefit fish and recreation in Bighorn Reservoir and Bighorn River downstream.

Dam operations may be impacted by climate change. Larger reservoir fluctuations may occur due to periods of extreme drought or wet periods. Early spring runoff can further disrupt the natural hydrograph, impacting when and how reservoirs are filled and can disrupt important fish life histories, such as spawning activity. Large dams may provide some respite from warming temperatures, as tailwater habitats below large reservoirs typically exhibit moderated temperatures preferred by coldwater species. Hungry Horse and Libby Dams are equipped with selective withdrawl, which are temperature control devices that can maintain optimal water temperatures downstream.

The Reserved Water Right Compact Commission completed negotiating water right compacts with tribes in Montana. Water compacts for the Fort Belknap and Confederated Salish and Kootenai Tribes were approved by the Montana legislature and await approval by the US Congress. Water rights associated with the tribal compacts are generally compatible with fisheries mitigation goals and past investments.

Applicable laws, rules and policies

Statute

75-1-101 et seq.: Montana Environmental Policy Act. Provides for the adequate review of state actions in order to ensure that environmental attributes are fully considered in enacting laws to fulfill constitutional obligations and to ensure the public is informed of the anticipated impacts in Montana of potential state actions.

75-5-101 et seq.: The Water Quality Act is the primary basis for water quality protection in the state. It provides authority for the surface water and groundwater standards, the mixing zone rules, the non-degradation rules and the subdivision/on-site subsurface water treatment rules.

75-7-101-125: The Natural Streambed and Land Preservation Act intent is to provide adequate remedies for the protection of the environmental life support system from degradation and provide adequate remedies to prevent unreasonable depletion and degradation of natural resources.

87-5-501 9: The Montana Stream Protection Act provides that the fish and wildlife resources and particularly the fishing waters within the state are to be protected and preserved to the end that they be available for all time, without change, in their natural existing state except as may be necessary and appropriate after due consideration of all factors involved.

76-5-101 et seq.: The Montana Floodplain and Floodway Management Act provides the necessary authority to regulate development through adoption of local ordinances designed to minimize flood damage within specific areas identified by the state as prone to flood damage.

77-5-307-7: The Montana Streamside Management Zone Law establishes and maintains a streamside management area along surface waters, which is sufficiently wide and which includes a sufficient number of canopy species to buffer against detrimental changes in the temperature regime of the waterbody to provide bank stability, and to withstand wind damage.

Water Quality Protection

Water quality protection is realized through the collection of relevant information and field data, participating in and influencing decision processes that have implications to water quality, responding to public concerns related to degradation of water quality, and, where possible, facilitating corrective actions.

Description of current operations and/or areas of work

Current operations focus on coordinating FWP efforts related to water quality. This includes: reviewing Montana Pollutant Discharge Elimination System (MPDES) permits; new pesticide registrations; reviewing proposed mine plans; toxicity assessments related to coal bed methane and other extractive types of development; field reviews for forest Best Management Practices (BMP); and other actions that have implications to water quality and fish and wildlife. Fisheries staff represents FWP on the Upper Clark Fork River Basin Advisory Council, which is responsible for facilitating public dialogue, promoting public understanding, and advising the Governor with respect to issues involving remediation and restoration efforts in the basin.

FWP collects (or coordinates collection of) data related to residues of bio-accumulative materials in Montana fishes. This effort includes working with the Department of Health and Human Services (DPHHS) to publish health advisories needed to protect consumers of sport fishes, as well as publishing and updating a fish consumption advisory brochure.

FWP investigates pollution-related fish kills and hazardous-material spills and coordinates with state and federal regulatory agencies on water quality issues. This work includes monitoring superfund activities that have implications to fisheries resources.

Water Quality staff coordinate with regional staff to provide technical assistance, identify and solve water quality problems and provide guidance and monitoring of the use of fish toxicants for management purposes (e.g., rotenone and antimycin treatments).

Special issues, challenges or initiatives

FWP has been actively involved in response activities with the two recent major oil spills that occurred on the Yellowstone River. On July 1, 2011, the Silvertip Pipeline (owned by Exxon Mobil) breached under the Yellowstone River near Laurel, MT, causing approximately 42,000 gallons of crude oil to be released into the river. FWP fisheries personnel, immediately assessed Yellowstone River fish for ecological and human health effects from the spill, documenting physical abnormalities and analyzing tissues for polycyclic aromatic hydrocarbons (PAHs). Staff were also extensively involved with Shoreline Cleanup Assessment Techniques (SCAT) teams, assessing oiled riparian habitats as far as 72 miles downstream of the spill site.

On January 17, 2015, the Poplar Pipeline breached and released approximately 32,000 gallons of Bakken crude oil into the Yellowstone River upstream from the city of Glendive. Despite challenging sampling conditions with ice covering much of the river, FWP collected fish and documented PAHs in the muscle tissues of several species and issued Fish Consumption Advisories to protect human health until sampling showed non-detects for PAHs in the fillets. For both spills on the Yellowstone River, FWP worked closely with the Natural Resource Damage Program to assess injury to aquatic resources caused by the spill.

To help respond to future spills, FWP conducted Incident Command System (ICS) 320 training for 29 agency staff in May 2018, including fisheries biologists, managers, and accounting staff. This training will support FWP to rapidly respond to incidents and interact with other agencies under the National Incident Management System (NIMS). In August 2018, several FWP biologists assisted staff with the USFWS and USGS in conducting a baseline fish health assessment related to hydrocarbon exposure on the Middle Fork of the Flathead. The information collected will help assess injury in the case of any future spills in the basin. In addition to collecting fish for baseline fish health, training was provided to demonstrate proper collection/processing techniques for fish tissues. To capture the information needed for future response actions, FWP is currently drafting an Emergency Operations Plan (EOP), to better assist staff performing various functions during an emergency or disaster that threatens aquatic resources in the State of Montana.

Habitat Restoration Grant Programs

Fisheries habitat restoration is accomplished through the initiative and collaboration of FWP and federal agencies, non-governmental organizations, and private individuals who identify worthwhile projects and require funding or support to accomplish them. The key funding source within FWP is the Future Fisheries Improvement Program (FFIP). The Community Pond program is also available primarily for small projects related to ponds including increasing accessibility.

Prior to 1989, FWP was occasionally involved with projects that restore fish habitat. This changed when the 1989 Montana Legislature passed the River Restoration Act. For the first time, a portion of fishing license dollars were allocated specifically for fish habitat restoration. The FFIP, established by the 1995 legislature, used funds from the River Restoration Act to provide a funding source for projects that enhance or protect habitat for wild fish populations in lakes, rivers and streams.

Potential projects must accomplish one or more of the following goals: improve or maintain fish passage; restore or protect naturally functioning stream channels or banks; restore or protect naturally functioning riparian areas; prevent loss of fish into diversions; restore or protect essential habitats for spawning; enhance stream-flow in dewatered stream reaches to improve fisheries; improve or protect genetically pure native fish populations; and/or improve fishing in a lake or reservoir. Projects that meet one of these goals are evaluated based on the following criteria: public benefits to wild fisheries; long-term effectiveness; benefits to native fish species; expected benefits relative to cost; in-kind benefits or cost sharing; importance of the lake or stream, local support or participation, approach to the cause of degradation, and sensitivity to the needs of other wildlife species. Commonly funded projects include riparian fencing, fish screening, channel reconstruction, fish passage improvements, barrier construction, and instream flow leases.

Since 2003, thirty-five projects have been funded under the Community Pond Program (CPP) with an average grant amount of \$11,500. Projects should create or enhance angling opportunity, be located near a community, and are encouraged to focus on youth/family angling, education, and Americans with Disabilities Act (ADA) accessibility. Recent projects include pond deepening, improved shoreline access, and the addition of fishing platforms at St. Regis fishing pond, the installation of a fishing jetty at Spotted Eagle Lake, installation of an aerator at Deep Mill Pond, and pond expansion at Thompson Falls State Park.

Description of current operations and/or areas of work

The FFIP accepts proposals for funding of projects twice per year. Proposals are evaluated by FWP and the 14-member citizen review panel makes funding recommendations. The composition of the review panel is determined by the enabling legislation. Funding recommendations are submitted to the Fish & Wildlife Commission for final funding decisions. Community Pond Program proposals are accepted once per year and are reviewed and approved by FWP.

For both FFIP and CPP, sponsors of approved projects must enter into a written agreement with FWP. Project funding may only be used for purposes described in the project agreement and the sponsor must ensure that the investment in restoration is protected for a minimum of 20 years.

From the onset of the FFIP, FWP recognized that monitoring was essential to evaluate the success of various restoration treatments and to ensure that program dollars are being spent responsibly. FWP conducts two types of monitoring: *implementation* and *effectiveness* for the FFIP. All project sites are reviewed shortly after construction to confirm that the project was completed as proposed (implementation). A subset of projects are monitored before, and for several years following project completion, to determine if the goals of the project are being met and the project is in compliance with the project agreements (effectiveness). The interval of monitoring is determined by the project type and land use activities involved. The CPP has no formal monitoring program, but projects are monitored and tracked by local fisheries biologists, who are generally involved in project development and completion.

Special issues, challenges or initiatives

One challenge for the FFIP and CPP is the lag time between project approval and project completion. Many applicants rely on multiple funding sources to cover project expenses and cannot secure all their funding prior to project approval. Further, approved projects are often large, complex, and take several years to complete. This can result in a lag between the time funds are committed to projects and the expenditure of committed dollars. Most projects are completed within three years of approval.

Public data sharing and storytelling is a critical part of transparency within FWP and an important part of cultivating program support for both restoration and funding. One challenge has been to find the most effective ways to share information digitally. Story maps have been developed to begin sharing success stories in a clearer and more engaging manner, the FFIP and CPP websites have been updated, and we have begun developing a habitat restoration component of the MFISH database. The goal is to allow the public to interact with completed projects and better understand the work that has been done in their backyards and on their favorite streams and lakes in Montana.

Applicable laws, rules and policies

Statute

87-1-257-259: River Restoration Program – Directs the department to administer a river restoration program that consists of physical projects to improve rivers and their associated lands to conserve fish and wildlife habitat. Established a special revenue account that earmarked dollars from the sales of resident, non-resident and combination fishing licenses.

87-1-272-273: Future Fisheries Improvement Program – Directs the department to establish and implement a statewide voluntary program that promotes fisheries habitats and spawning areas for the rivers, streams and lakes of Montana's fisheries. Projects must provide benefits to wild fish. Establishes a review panel and a project approval process. The original bill re-directed funding from the River Restoration Program, as well as other fishing license dollars into the Program, but this was legislated as a one-time only. Subsequent legislative session re-directed fishing license dollars into the Program as one-time only events. The department essentially has rolled all River Restoration dollars into the Program since inception.

87-1-283, 15-38-202: Bull Trout and Cutthroat Trout Enhancement Program – Expanded the Future Fisheries Improvement Program by adding revenue from the Resource Indemnity Trust Fund, which was directed toward restoring habitats and spawning areas and reducing species competition in rivers, lakes and streams for Montana's bull trout and cutthroat trout. Funding for qualified mineral reclamation projects shall be approved before any other types of qualified projects. Directed the Department to work with the Department of Transportation to implement the program. Added the following to the Future Fisheries Review Panel: one member with expertise in silviculture; one member with expertise in mining reclamation techniques; one member with expertise in fisheries; and an ex-officio member from the Montana Department of Transportation. Amended in 2013 to open the Program and include all of Montana's native fish.

87-1-274: Emergency In-stream Flow Funding – Establishes mechanisms to be in place to maintain stream flows sufficient for fisheries and other aquatic resources during emergency low flow conditions. Authorizes uncommitted funds allocated to the department from the federal state wildlife grant program or other available federal funds; matched with up to \$500,000 from the Future Fisheries Improvement Program and Bull Trout and Cutthroat Trout Enhancement Program; for voluntary water leases or other augmentation measures. Revised in 2013 to include all of Montana's native fish.

Stream Permitting

Under the Montana Stream Protection Act (SPA) and the Montana Natural Streambed and Land Preservation Act ("310 law"), FWP reviews proposed projects that may affect aquatic resources. The department uses hydrology, engineering and fish habitat principles to review projects proposed by government and private parties. Some, but not all, projects require field inspections. The department then recommends modifications or mitigation measures necessary to protect fisheries or fish habitat.

Description of current operations and/or areas of work

Regional fisheries personnel review proposals and conduct environmental reviews of land and water management activities planned by numerous federal and state agencies, and private entities including: U.S. Forest Service (USFS), Bureau of Land Management (BLM), National Park Service (NPS), U.S. Fish and Wildlife Service (USFWS), U.S. Bureau of Reclamation (BOR), Federal Energy Regulatory Commission (FERC), Montana Department of Natural Resources and Conservation (DNRC), Montana Department of Transportation (MDT), Montana Department of Environmental Quality (DEQ), public and private hydroelectric developers and operators, oil and gas pipelines, and private aquaculture operations.

FWP provides comments and technical advice as necessary to reduce or mitigate effects of projects on fish populations and aquatic habitat resources. It promotes proper aquatic habitat and fishery management by providing accurate and sound information on habitat and ecological principles, fish populations, aquatic resources, and economics to federal and state agencies, private landowners, special interest groups, and the general public.

Under the provisions of the SPA, state, county, municipal and political subdivisions must notify FWP about construction projects that may affect the bed or banks of any stream or its tributaries. FWP reviews the projects and makes recommendations to the applicant to eliminate or reduce any adverse impacts.

All applications from the MDT are handled by the FWP Fisheries Division in Helena. Through a Memorandum of Understanding (MOU) with the MDT, FWP reviews construction plans and erosion control plans for road construction, makes recommendations, and monitors the projects for compliance. Several federal agencies have also entered into a MOU with FWP concerning implementation of the SPA.

The Montana Natural Streambed and Land Preservation Act (310 law) requires fisheries staff to review proposed streambed or stream bank projects in cooperation with the local Conservation

District Board of Supervisors. Staff also makes recommendations to reduce or eliminate impacts to the streambed or stream bank and thereby protect fish habitat.

In addition to the SPA and 310 Law, FWP has been granted the authority to issue a "318 authorization", or short-term narrative water quality standards for total suspended sediment and turbidity resulting from stream-related construction activities or stream enhancement projects, as established by state law. DEQ developed a programmatic environmental assessment outlining project types and dimensions for which FWP can issue 318 authorizations.

Special issues, challenges or initiatives

Coordination with MDT on highway projects is important. FWP delivers presentations to MDT's bridge, hydraulic, and project development engineers regarding the role of stream function and habitat in permitting decisions. This fosters working collaboratively with MDT to bring about improvements to the permitting process and restoration projects.

Applicable laws, rules and policies

Statute

87-5-501-9: The Montana Stream Protection Act provides that the fish and wildlife resources and particularly the fishing waters within the state are to be protected and preserved to the end that they be available for all time, without change, in their natural existing state except as may be necessary and appropriate after due consideration of all factors involved.

75-7-101-25: The Natural Streambed and Land Preservation Act intent is to provide adequate remedies for the protection of the environmental life support system from degradation and provide adequate remedies to prevent unreasonable depletion and degradation of natural resources.

75-5-318: Short-term water quality standards for turbidity, establishes standards for total suspended sediment and turbidity resulting from stream-related construction activities or stream enhancement projects.

Water Recreation and Access Program

Water Recreation and Access Program Goals

As outlined in the FWP Vision and Guide 2016-2026, there are three overarching commitments for the Water Recreation and Access Program:

Provide diverse opportunities and services;

Increase participation in recreational opportunities provided by fish, wildlife, and state park resources;

Conserve, protect and enhance fish and wildlife populations, their habitats, and the public's opportunity to enjoy them.

Actions to attain these goals include:

- Provide diverse opportunities for people to connect with Montana's outdoors to meet the needs of those who use and value the resources we manage.
- Maintain and improve FWP facilities, infrastructure, and resources to sustain quality places and experiences.
- Work with landowners to sustain and enhance access to public waters and private and public lands.
- Improve access to recreation opportunities by removing barriers to participation.
- Secure sufficient public access to fish and wildlife so that populations are effectively managed and conflicts are minimized.

Specific strategies and examples for each action and their relationship with the public service and resource management goals are outlined throughout the discussion below.

Background and Description

The FWP Water Recreation Access Program encompasses a broad area of responsibility that facilitates access to public waters and management of recreational opportunities, both on the water and at access sites. There are a number of ways in which FWP helps to provide access to public waters but one of the most notable includes FWP-owned or managed public Fishing Access Sites (FAS) that provide fishing opportunities for virtually all of Montana's fish species. The number of FASs has grown from relatively few sites in the 1960s and early 1970s to a network of several hundred in 2018. The primary purpose of these sites is to provide access for angling; however, a 2016 survey of FAS visitation showed that 51% of use at sites is for purposes other than fishing, including non-angling boating, picnicking, swimming, hiking, bird watching, and hunting. Based on these findings, site development and acquisition in the future will be more attentive to providing opportunities for these users.

Another way that FWP helps to provide access is through agreements with private landowners. This access can be in the form of formal lease agreements through which FWP establishes an FAS on private land. There are also agreements where the landowner grants permission to the

public to cross private land to gain access to a stream or pond; these are typically walk-in, non-motorized access opportunities. Additionally, FWP works closely with other land management agencies, counties, municipalities, and other entities with authority over lands adjoining public waters, ensuring consideration in the location of other public access sites on a waterbody when assessing the need for and placement of FWP fishing access sites. This coordination often includes cooperative management agreements and coordinated planning for the management of access sites and associated recreation. FWP also manages water-based recreation and commercial use at fishing access sites and on some high-use rivers. This management includes special rules aimed at protecting the resources and maintaining the quality of the recreation experience, and in some locations, a permit system is implemented to regulate commercial activities.

Finally, FWP plays a role in advocating for, and protecting the public's right to gain access and use streams regardless of the ownership of the underlying land. This role entails guarding against undesirable changes to the Montana Stream Access Law, proper interpretation and implementation of the law, and efforts to educate the public about complying with the law and showing respect for private property. Montana's strong stream access law provides Montana anglers with an abundance of opportunities to access the public waters of the state.

FWP Fishing Access Site Program

As of 2018, FWP has 338 fishing access sites located throughout the state. The primary purpose for these sites is to provide angling access to public waters in Montana. Roughly two-thirds of the sites include a boat ramp and nearly a quarter of the sites offer camping. While angling is the primary purpose of these sites, there are other types of recreation occurring at fishing access sites that encompasses the diverse interests of many Montanans.

The FAS Program has developed in concert with the public's right to free use of public waters as guaranteed by the Montana Stream Access Law in 1985. That law provides for use of water and streambeds regardless of ownership; thus, the FAS program focuses on providing small-acreage access points that are just large enough to provide for a boat ramp and parking, with the goal of just getting people on the water. Conversely, on smaller rivers and streams where bank fishing or wade fishing is more typical, a larger premium is placed on acquiring sites with greater amounts of stream frontage. The FAS Program is funded primarily through the sale of fishing and hunting licenses, federal aid that comes from excise taxes on the sale of sporting goods equipment, and a small portion from motor vehicle license fees.

Description of current operations and/or areas of work

There are two primary areas of work within the Fishing Access Site Program: acquisition and development of new sites, and operation and maintenance of existing sites.

There are a number of factors that FWP considers when determining whether to acquire a new fishing access site. These include but are not limited to; public demand for the new site, location and distance between existing sites, availability of property and willing sellers, available funding, and projected development and operation costs, and availability of resources to develop

and maintain sites once acquired. The FWP regional staff is responsible for identifying sites for acquisition based on these factors. The Fisheries Division headquarters reviews each regional acquisition proposal based on overall access priorities and needs and available funding. The FWP Commission is the final decision-maker for FWP. All FWP land acquisitions are subject to approval by the Land Board.

The acquisition process can be described as a balance between a "needs-driven process" and an "opportunity-driven process". Whereas, FWP is actively searching for opportunities that meet a certain access need or priority, and FWP may pursue an acquisition if it is believed that an opportunity might not be available in the future or may become cost-prohibitive. FWP coordinates the acquisition of new access sites and is responsible for the maintenance and operation of existing sites. While acquisitions of new access sites or development of existing sites are being sought after, a number of complex conditions must be linked to feasibility. Conditions that are often relevant include; availability of funds for maintenance, development, and enforcement, more stringent environmental standards, inadequate sources of funding, and increased demands by the public for added services.

After acquiring a site, FWP develops it to meet basic standards for an FWP FAS. This typically includes a gravel access road and parking area, vault latrine, and if applicable, a boat ramp. At some locations FWP develops primitive camping sites but overall, FWP strives to limit development at FASs to a minimum that adequately supports the primary purpose of the sites (providing angling access). For this reason, FWP fishing access sites typically do not have some of the amenities found at some state and federal parks (e.g., paved roads, flush toilets, and electrical or sewer hook-ups). Site development also takes into account recreation management needs (e.g., building additional boat ramps at a site to alleviate congestion and reduce launch time). In other cases, FWP may choose to limit the type and/or amount of development at a site as a means of managing use numbers and congestion on the water.

As part of the operation and maintenance of fishing access sites, FWP is responsible for typical activities that include; fencing, facility and grounds upkeep, weed control, vandalism repairs, signage, latrine pumping, camping-fee collection, maintenance of road/parking areas, landowner relations, and conflict resolution. It is important for FWP to serve as a "good neighbor" to adjoining property owners. This includes an emphasis on weed control, fire prevention, and responsible use and respect for private property.

Special issues, challenges or initiatives

The cost of acquiring and maintaining access sites is a challenge due to the limited resources available. As land values have increased over the past two decades, the cost of suitable FAS's has increased. Land values are expected to remain at the current (higher) levels, and future site acquisition costs will reflect that market trend. The demand for new fishing access sites exceeds the financial resources available for acquiring, developing and maintaining sites, meaning that FWP must carefully review and prioritize each request. This scrutiny includes consideration of which waterbodies are most in need of additional access versus those where it is desirable but not critical. This decision is also influenced by the real estate market and the presence of willing sellers; opportunities occur less frequently on some waterbodies compared to others. Not all

acquisitions cost money. In some cases, private landowners will donate property to FWP for the purpose of providing fishing access. The department must still take into the account the cost of developing and maintaining these donated sites.

Another challenge is the increase in non-angling types of recreation at fishing access sites. The primary purpose of the sites has historically been to provide access for angling. The availability of federal funding is predicated on meeting this purpose. There are other forms of recreation occurring at fishing access sites besides fishing though. This recreation includes; hunting, boating, swimming, tubing, picnicking, camping, bird watching, and special events. However, many of these users do not pay for the maintenance of the sites: the 2016 visitation survey found that 42% of users did not possess a fishing license. Therefore, while FWP welcomes all users to the sites, it must be attentive to those who have paid for them. If a future funding mechanism can be found to get the non-angler to pay, it will be easier to justify providing amenities they may wish to see at the sites. It might also prompt a change in the characteristics of sites that are acquired. In the future, the name "Fishing Access Site Program" may be changed to "Water Recreation Access Program" to reflect the diverse use by the public at the FASs.

Applicable laws, rules and policies

Statute

23-1-110: Improvements on developments at Fishing Access Sites. The FWP commission shall adopt rules establishing a policy whereby any proposed improvement or development of fishing access sites that significantly changes fishing access site features or use patterns is subject to notice of proposed modifications, both statewide and locally, and to opportunity for a public meeting and public comment on the advisability and acceptability of the proposal.

23-1-126: The good neighbor policy of public land use, as applied to public recreational lands, seeks a goal of no impact upon adjoining private and public lands by preventing impact on those adjoining lands from noxious weeds, trespass, litter, noise and light pollution, streambank erosion, and loss of privacy.

Administrate Rule

12.8.107: State fishing access sites, purpose is to provide permanent public access to high-quality rivers, streams, and lakes.

12.8.701-9: Designation of primitive fishing access sites.

FAS Rule: The current FAS Rule (2019-2020) is reauthorized biannually by the Fish and Wildlife Commission.

River Recreation Management and Commercial Use Permitting

The popularity of some rivers in Montana has led to conflicts between users, concerns over congestion on the water and at access sites, and in some cases, impacts on the resources. The Commission has authority to adopt rules governing recreational uses of all public fishing reservoirs, lakes, rivers, and streams that are legally accessible (87-1-303(2) MCA). The public

prefers to recreate without restrictions on their opportunities and, if restrictions become necessary, less restrictive management actions should be used before more restrictive management actions.

Under this authority, FWP more intensively manages angling and other forms of water-based recreation at some access sites and on some bodies of water. This is usually in response to concerns about the quality of the social experience and/or the volume of use having an undesirable impact on the resources. FWP uses a variety of management tools to address these concerns including greater staff presence at sites and on the water, information on ways users can minimize conflicts with other users, permit systems for commercial use, and in some situations, special rules aimed at reducing conflicts.

FWP may approve commercial use that helps FWP to achieve its resource management goals and/or provides desired services to the public. Commercial use is a privilege, not a right, and must be properly managed. Commercial use includes any person, group, or organization that makes or attempts to make a profit, vend a service or product, receive money, amortize equipment, or obtain goods or services as compensation from participants in activities occurring on land that is under the control, administration and jurisdiction of FWP. Examples of commercial use include trail rides, guided walks or tours, float trips, guided angling or hunting, game retrieval, professional dog training, equipment rentals, retail sales, food concessions, filming, firewood cutting, construction related activities, and research when accompanied by paying clients.

Description of current operations and/or areas of work

The Commission adopted Statewide River Recreation Rules in 2004 to provide guidance and direction to FWP when managing recreation on rivers, including the development of management plans and rules. In 2019, seven rivers are managed under special management plans or rules and six of these (Beaverhead, West Fork Bitterroot, Big Hole, Blackfoot, Alberton Gorge and Madison rivers) are the responsibility of the FWP Fisheries Division (the Smith River State Park is managed by the FWP Parks Division).

The Beaverhead and Big Hole rivers are managed under rules that restrict the number of licensed fishing outfitters and the number of client days they can conduct. There are also rules restricting float outfitting and nonresident float fishing on certain days of the week and certain sections of river. The West Fork Bitterroot restricts the number of licensed fishing outfitters and the number of trips they can conduct within each of four river reaches. The Blackfoot and Madison rivers are managed under a Special Recreation Permit system in cooperation with the Bureau of Land Management. A permit is required to conduct commercial use, a competitive event, or organized group activity. There are no limits on the number of permits available. FWP adopted a recreation management plan for the Blackfoot River in 2010 and is currently developing a plan for the Madison River at the time of this writing (2019).

FWP manages commercial use through a permit system and fees. There are two types of commercial use permits: the Fishing Access Site Permit and the Commercial Use Permit. The FAS Permit is used to authorize water-based service providers (e.g. fishing outfitters and guides,

whitewater guides, etc.) at the majority of fishing access sites. The FAS Permit is valid at the majority of FWP fishing access sites around the state. The Commercial Use Permit is available to water-based service providers on restricted rivers (Beaverhead, Big Hole, Blackfoot, Madison) and all other forms of commercial use occurring on FWP lands.

Special issues, challenges or initiatives

Outfitters and guides provide a desired service to some members of the angling and general recreating public. The outfitting industry is important to the state's tourism economy. It is necessary to manage this type of commercial use to ensure that it is compatible with the general, non-guided angling and recreating public. On many waterbodies, compatibility is not an issue. However, there are some rivers where the public has expressed concern over the impact of commercial use on the general, non-guided angling public. FWP has responded in a number of ways including; restrictions on the number of outfitters authorized to operate on a waterbody, a cap on the volume of use allocated to each authorized outfitter, and special rules that specify days of the week and/or sections of rivers where outfitting is restricted or prohibited.

Conflicts between user-groups (e.g. between wade anglers and float anglers) and concerns about congestion on the water and at access sites, can require special management attention. FWP has special regulations on some rivers, e.g. regulations that prohibit angling from a boat, or regulations that prohibit nonresident float fishing on some sections of river. These types of regulations are intended to resolve social concerns and for the most part are not addressing resource problems. The FWP Statewide River Recreation Rules are intended to guide development of management plans and rules for these purposes.

Applicable laws, rules and policies

Administrative Rule

12.11.401 –55: Statewide River Recreation Management Rules establish the policies and procedures for developing river recreation management plans and rules.

12.14.101 –70: Commercial Use Rules establish the policies and permit requirements for commercial use at state parks, fishing access sites, and wildlife management areas.

Commercial Use Permit Biennial Fee Rule (2011 - 2013). The Commercial Use Permit Biennial Fee Rule establishes the permit fees for commercial use at state parks, fishing access sites, and wildlife management areas.

Stream Access

The Montana Stream Access Law (23-2-301, MCA), originally adopted in 1985, allows the public to use all public waters for water-based recreation regardless of who owns the land underlying the water. In general, the law allows the public to use streams up to the ordinary high water mark. The public may also gain access to streams for recreational use by using a public bridge or county road. FWP promotes and defends the public's rights under this important law.

Description of current operations and/or areas of work

FWP uses various public outreach tools to educate the public and private landowners about the stream access law. It is important that people understand what the law legally allows and the importance of maintaining good relationships with private landowners. FWP encourages resource users to do so by respecting private property, being careful with campfires, and practicing good etiquette when recreating in the vicinity of private land.

FWP also works to uphold the public's right to use the public waters. In the field, FWP investigates reports of landowners or the recreating public abusing the law. FWP also investigates stream barriers and helps to establish reasonable and safe portage routes.

Special issues, challenges or initiatives

Montana has a long history of embracing private property rights. There are some who view the stream access law as an infringement on these rights and therefore advocate for laws that would diminish or eliminate the stream access law. FWP continues to monitor these efforts and advocates for the rights of sportsmen and sportswomen of Montana. FWP also emphasizes the importance of respecting private property and that the recreating public must play an active role in maintaining good relations with landowners. This responsibility includes attentiveness to private property boundaries, prevention of wildfires and the spread of noxious weeds, and recreating in a respectful manner when in the vicinity of private land.

Applicable laws, rules and policies

Statute

23-2-301: Montana Stream Access Law allows the public to use all public waters regardless of who owns the land underlying the water.

23-2-408: Rulemaking for access to the Smith River.

Aquatic Invasive Species Program

AIS Program Goals

As outlined in the FWP Vision and Guide 2016-2026, the overarching commitment of the AIS Program is to:

Conserve, protect, and enhance fish and wildlife populations, their habitats, and the public's opportunity to enjoy them.

Capacity building for effective management.

Actions to attain this goal include:

- Restore, maintain, and protect native species and their habitats.
- Improve and protect fish and wildlife habitat so that high-priority areas are conserved and connected at a landscape level.
- Anticipate and respond to emerging issues that will affect fish and wildlife.
- Build advocacy, interest in, and support for fish, wildlife and state parks resources.

Specific strategies and examples for each action and their relationship with the resource management goal are described below.

Restore, maintain, and protect native species and their habitats

AIS present a significant threat to fisheries, aquatic habitat and water based infrastructure. Preventing the movement and introduction of AIS helps to protect Montana's native species, water based resources and the public's opportunity to enjoy them. Watercraft inspection is the primary tool utilized to ensure AIS are not being transported into and throughout the state. The stations ensure watercraft are clean, drained and dry and help to educate the public on what they can do to help protect Montana's waters.

Improve and protect fish and wildlife habitat so that high-priority areas are conserved and connected at a landscape level

AIS degrade aquatic habitats and early detection of new populations can help mitigate the negative impacts. Through ongoing survey and monitoring efforts, AIS can be detected when populations are small, allowing for a more effective response to prevent further spread or possible eradication. AIS surveys are also conducted annually at hatcheries to ensure AIS are not being moved through fish stocking efforts.

Anticipate and respond to emerging issues that will affect fish and wildlife

All states and western provinces have active AIS programs and it is important to coordinate closely to identify and address emerging issues. FWP engages with local and regional partners to ensure the AIS program effective, efficient and consistent in the state and across the region.

In the event that a new AIS population is found, it is also important to have the ability to respond quickly. To prepare for an early detection / rapid response event, FWP utilizes the Incident Command System (ICS). Staff are trained in ICS and regular training exercises are held to ensure response preparedness.

Build advocacy, interest in, and support for fish, wildlife and state parks resources

Advocacy and interest in protecting Montana's waters from AIS is accomplished through active outreach and education. Boaters and the public need to be aware of the threats that AIS pose to aquatic resources and do their part to prevent their spread. The program promotes the clean, drain and dry message to encourage behavior stops the spread of AIS.

Description of current operations and/or areas of work

Aquatic Invasive Species (AIS) are a serious threat to Montana. AIS are transported by humans on boats, gear and equipment, or are intentionally moved from one area to another. The AIS of highest current concern in Montana are zebra/quagga mussels, Asian carp, Viral Hemorrhagic Septicemia Virus, and invasive aquatic weeds (e.g. Eurasian watermilfoil, flowering rush). Unfortunately there are very few options available to control and manage AIS once established, and eradication is costly and often not possible. For this reason, prevention is the most effective tool to address the AIS issue. AIS can clog water conveyance systems, significantly impacting irrigation, power generation and municipal water systems. Other impacts include degraded habitat and reduced recreation opportunities.

Montana's Aquatic Nuisance Species Management Plan was approved by then-Governor Martz and the National Aquatic Nuisance Species Task Force in 2002. The first AIS Act was passed by the legislature in 2009 and the program was expanded again after the 2011 legislative session authorized additional funding for the program. FWP manages the AIS program in Montana, including watercraft inspection, early detection monitoring, rapid response preparedness and AIS outreach and education. FWP works closely with state, federal, tribal, regional and local partners to coordinate and implement a consistent and effective AIS program.

Dreissenid mussel veligers were detected in Tiber Reservoir and a suspect detection in Canyon Ferry Reservoir in late 2016. This resulted in a rapid expansion of the AIS program. New laws and regulations were put in place mandating inspection for all watercraft exiting Tiber and Canyon Ferry. Mandatory inspection requirements were also established for all watercraft entering the state and those crossing west over the Continental Divide. Additional funding was allocated to the program to increase watercraft inspection, monitoring and outreach efforts. Over 30 watercraft inspection locations were operated throughout the boating season. FWP encourages locally driven efforts and works closely with partners to encourage effective and consistent AIS prevention in the state.

Early detection and monitoring is a large part of the AIS program. Staff survey all major waters in the state annually, many waters multiple times, searching for AIS. Surveys consist of plankton tow sample collection for veliger early detection and shoreline and substrate surveys looking for adult mussels, invasive plants, snails, clams and crayfish. Plankton tow samples and specimens are submitted to the FWP AIS lab for analysis. The FWP lab also analyzes plankton tow samples from partner states in the Missouri River basin for dreissenid mussel early detection.

In addition to monitoring streams, rivers and lakes for the presence of AIS, all state, federal and private hatcheries are required to have an annual AIS inspection prior to being permitted to export any live fish. Imports and exports from hatcheries and private ponds are highly regulated because of their ability to spread invasive species, including fish pathogens. It is recognized that with the normal movement of fish and eggs into and out of these facilities, that invasive species such as fish pathogens, invertebrates or plants, could also be moved along with the fish and water. If an invasive species is detected in one of these facilities, the facility will be quarantined and actions taken to minimize the risk of the invasive species spreading from that facility.

Outreach and education is a major component of the AIS program to ensure boaters and the public assist with AIS prevention and early detection. A public information officer in the Communication and Education division at FWP is dedicated to AIS and provides ongoing education and outreach. FWP coordinates closely with partners to craft and deliver a consistent and effective AIS message.

The AIS program coordinates closely with partners around the state including tribes, conservation districts, non-governmental organizations and the public to involve, engage and coordinate AIS prevention, early detection and outreach efforts. FWP also engages with regional and national partners to improve AIS prevention, early detection and education throughout the region.

Applicable laws, rules and policies

Statute

- 87-1-207: Authorizes the use of check stations to check licenses and fish in possession.
- 87-3-105: It is unlawful to import for introduction or to transplant or introduce any wildlife into Montana except in accordance with 87-5-701 through 721.
- 87-3-210: A FWP permit is required to import live non-salmonid fish or eggs except when intended for use in home or office aquarium. A permit is always required to import salmonids (87-3-221).
- 87-3-221: Specifies the certification requirements for importation of salmonid fish or eggs.
- 87-3-222: Dead salmonid fish or eggs may be imported if they have been processed or prepared in a manner to kill those pathogens specified by FWP as posing a threat to fisheries.

- 87-3-223: Provides rulemaking authority for importation testing and inspection.
- 87-5-701: To protect native wildlife and plants, and agricultural production, the state can prohibit the importation for introduction and the transplantation or introduction of wildlife in the state unless it can be shown that no harm will result.
- 87-5-705: Allows the importation, possession, or sale of exotic wildlife only if it is allowed by law or commission rule. Provides rulemaking authority to designate lists of noncontrolled, controlled, or prohibited exotic wildlife.
- 87-5-721: Defines penalties for violation of importation and introduction
- 80-7-1001-14: Montana Aquatic Invasive Species Act. Establishes Departmental responsibilities, rulemaking authority, the ability to establish invasive species management areas and associated check stations, and includes a penalty section.

Administrative Rule

- 12.11.34: Aquatic Invasive Species Inspection Station Rule. Provides FWP with the authority to establish inspection stations for the purpose of inspecting watercraft for the presence of aquatic invasive species, and establishes protocols if an invasive species is found at an inspection station.
- 12.5.701-703: Restrictions for contaminated waters, includes bait use restrictions and transfer of fish and bait from contaminated areas.
- 12.5.706: Identified areas threatened with aquatic invasive species and applicable quarantine measures.
- 12.5.707: Identified bodies of water confirmed or suspected for aquatic invasive mussels.
- 12.6.2215: List of prohibited species.